

# Clinical Medicine

## A Monthly Postgraduate Course

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### Dr. Adolf Lorenz

**A**DOLF LORENZ was born in Silesia, Austria, in 1854.

He was graduated from the University of Vienna in 1880 and later became professor of surgery in that institution.

His interest became attracted to the special field of orthopedic surgery and in this field he began to devote particular thought and research to the problem of the reduction of congenital dislocation of the hip.

He formed an association with Bradford, of Boston, and Hoffa, of Berlin, and they studied the subject together. They finally announced that they had devised a satisfactory open operation for the treatment of these cases and then, just at the psychological moment, came the announcement that Lorenz, of Vienna, had devised a closed or "bloodless" method for the treatment of these unfortunate cripples which would afford better results than any procedure then known.

In 1895 he published a treatise on "Dislocation of the Hip", and his method of "bloodless" reduction received the approval of the Berlin Medical Congress.

We have had cripples of this character from time immemorial but most of them lacked the means to employ the services of famous foreign specialists.

In 1902, however, the parents of Lolita Armour, who was born thus handicapped,

having heard of the remarkable cures which were being obtained by the Viennese professor, and being so well supplied with this world's goods that price was no object, sent for him to come to this country and perform his operation on the little girl.

He came (for a fee popularly reported to have been \$100,000); he procured his license to practice medicine and surgery in Illinois; he operated; the operation was successful and much kudos accrued to him thereby.

Be it said that, while he was in this country at that time, he performed the same operation on many poor children in Chicago without making any charge whatever. Some of us who were students at that time remember him—a heroic figure of a man, with his great beard and his powerful, skillful hands—and the work he did made a profound impression upon us.

His method did not, however, go unchallenged in this country. It was received with coolness at first and, later, with open skepticism. It is interesting to note that those who have spent most time and study in perfecting themselves in the technic of this treatment are the ones who most cordially recommend it; while its opponents are largely among those who have had least training and experience in doing this kind of work.

He came here again in 1921, with his sons, Albert and Conrad, as his assistants, for the purpose of holding clinics in bloodless orthopedic surgery.

Knowing the world-wide fame of his technic, the papers, unfortunately, took him up and heralded him far and wide as the Messiah of the crippled. These rushed to his free clinics in crowds. The medical societies turned against him and nearly prevented him from getting a license to practice in New York. From worry and overwork he almost broke down, and returned sadly to his own country.

He is now with us again—older, wiser, mellowed, and preaching the gospel of a life lived in its fullness, but in moderation. He has come to note the progress of his former patients, and possibly to operate upon some new ones.

Dr. Lorenz has not been a very prolific contributor to medical literature, but he has to his credit quite a number of significant papers, both in his own country and in the American medical journals.

Abolish fear and you can accomplish whatever you wish.—Elbert Hubbard.

#### DO NOT CUT FEES

Not long ago one of the big tobacco-manufacturing concerns advertised a special sale on a brand of cigarettes which we do not ordinarily smoke.

Happening to be in need of nicotinous refreshment, we approached a cigar stand and asked for one of these special packages, only to be informed that the supply was sold out. We then purchased our usual brand.

Noting a peculiar expression on the face of the tobaccanist, we asked the reason and he replied that the firms who put on such sales lost money in the end, because, after a man had once bought a brand of cigars or cigarettes at a reduced price, even if it were the kind he regularly smoked, he would, as a rule, never pay the standard price for that particular brand again, but would change to another which, presumably, he did not really like so well. He added that the biggest and most consistent sellers were brands which had never been sold at a reduced rate.

If this interesting psychological trait appears in connection with the purchase of tobacco, it seems reasonable to suppose that it will apply, with equal or greater force,

to the purchase of medical advice or services.

Patients are fully justified in believing that a physician knows the value of his own services better than anyone else can possibly know it, and that the price he sets upon such services is consistent with their worth. If they want cheap service they will go to a cheap doctor; but if they desire to obtain the best medical advice available they will consult the man who places a high estimate upon his own liabilities.

Make no mistake in this, however. No man is fool enough to pay a superheterodyne price for a crystal-set service *more than once*. If your fees are high you must be in a position to make the returns to your patient so satisfactory that he will be convinced that they are cheap at the price.

The only permissible basis for competition among medical men is that higher form of rivalry known as *emulation*—who can *give the most* in proportion to the charge made!

If you are not willing to strive, *every day*, to make your advice *worth more* to the people who come to consult you, why then, of course, it is proper to consider that advice in the same category with potatoes or crackers and cheese, and bid for patronage as the grocers do, by cutting the price.

Remember, however, that if you do cut your fees you will find it very difficult to raise them again to the former standard without a serious falling off in your clientele; and that, in cutting them, you are lowering your own standards, professionally as well as financially, and undermining the high standing of the medical profession in general.

It is a far more worthy and more satisfying proceeding, from every possible point of view, to increase your *value*, to your individual patients and to the community in general, and then raise your fees to correspond with the increased worth of your services.

Living, a man knows not his soul; dead, he knows not his corpse.—Chinese Proverb.

#### QUACKS AND QUACKERY

Chicago is stirring up her quacks again, the *Tribune* having sent out a hearty, husky, young man, previously examined minutely by experienced and reputable physicians and declared to be in perfect health, to interview some of the more blatant advertising "specialists", all of whom, so far, have found something wrong with him

which they would undertake to cure for a substantial cash fee, followed by weekly payments.

In considering the case of the irregular practitioners, we must carefully distinguish them from the quacks. The former, while they assume the title "Doctor," in many cases, do not pretend to be graduates in Medicine, and are using measures other than medical, many of which have been neglected or abandoned by regular physicians.

The quacks, on the other hand, do claim to be doctors of medicine, and produce diplomas to support their claims. To be sure, many or most of these diplomas are from "fly-by-night" or correspondence school institutions, commonly known as "diploma mills," but there is a fair sprinkling of credentials from reputable institutions among the lot.

Most of the men so far investigated have behind them long and disgraceful records of convictions of various highly unethical or illegal practices in various cities. Some are definitely criminals. At least one of those on the list was found to be a member of the County Medical Society.

Such exposés as this should cause us to stop and think very seriously. If we permit charlatans and vultures of this stripe to carry on unquestioned, and even affiliate with our professional bodies, there is reason in the rather widespread popular feeling that, until we get rid of the "beam in our own eye," we are in a poor position to quibble about the "mote in our brother's eye."

Quacks are, thank God, rather rare in our smaller communities, but every city of any size has them in more or less abundance, and it is the business of the members of the regular profession to extrude this deleterious material from our body politic.

Not for individuals! That would lay us open to the charge of professional jealousy. Large organizations of physicians can stir up the newspapers to make investigations, or, in extreme or urgent cases, can fitly act directly.

Every medical society has a membership committee whose business it is to pass upon the desirability of applicants for membership. Often the reports of this committee are a mere formality. This should not be so. Unless the applicant is personally known to one or more members of the committee as a man of probity, his credentials should be inspected and his record looked

up. This can be done very readily by writing to the A.M.A., where the records of practically every physician in the United States are on file.

Great care should be taken that the members of this committee are never swayed by personal prejudice or dislike, but equal care should be exercised that no disreputable practitioner gains recognition and standing among us.

Let us, individually and collectively, lend every aid in our power to every sincere effort to purge our ranks of the shysters and quacks that disgrace the name of Doctor of Medicine.

No man is a good physician who has never been sick.—Arabian Proverb.

## CINCHONA AND QUININE

Cinchona is the dried bark of a family of South American trees known as the *Rubiaceæ*, the most common varieties in use being *Cinchona ledgeriana* and *C. calisaya*.

This drug is used, to a considerable extent, in the form of the tincture or compound tincture, as an ingredient of many bitter, stomachic tonics, but as its effects are entirely those of the alkaloids it contains they need no especial discussion, as it is the alkaloids which are of predominant importance in therapeutics.

All the alkaloids of cinchona (said to number 27) are remarkably similar in their effects, differing markedly in this respect from those of opium and jaborandi, and they fall into two general classes: the quinine group, of which quinine and quinidine are the important members; and the cinchonine series, where we find cinchonine and cinchonidine. These are not employed in a pure state, because of their insolubility, but as the salts of various acids, such as sulphuric, hydrochloric, salicylic and a number of others. These salts all dissolve fairly readily but differ greatly in their solubilities.

As quinine is the alkaloid in widest use, its action will be described and may be taken as representing the characteristics of the cinchona alkaloids in general.

*Physiological Action.*—In medicinal doses quinine acts upon the *nervous system* by stimulating the cerebrum and decreasing reflex activity. By its action as a general stimulant to the whole body it tends to support the *circulation*, causing a slight increase in the pulse rate and blood pressure.

Its effect upon the *blood* is very interesting, for, even in small doses, it causes the white cells in the blood vessels to cease to migrate, while those outside continue to do so. Small doses distinctly increase the phagocytic power of the leucocytes, but very large doses decrease this power. Medicinal doses gradually increase the red blood cells. These facts give scientific support to those who have long believed that small doses of quinine aid the body in combating infections.

The effect upon *respiration* is slightly stimulating.

The *temperature* is but little affected, except in malarial fevers. As an antipyretic it is vastly inferior to the coal-tar synthetics.

Upon the *stomach* it acts as a tonic and stimulant. Moderate doses are slightly constipating. It decreases tissue-waste and nitrogenous excretion.

It is *absorbed* from the stomach and duodenum (being precipitated in the lower bowel), and is rather slowly *eliminated*, chiefly by the kidneys.

**Toxic Effects.**—Death from quinine poisoning is almost unknown, but an idiosyncrasy to the drug is not uncommon and, where this exists, very distressing untoward effects are sometimes produced by small doses, and such effects often follow the exhibition of large doses, even in perfectly normal persons.

The milder symptoms of cinchonism are: buzzing or ringing in the ears; fullness in the head or headache; disorders of sight, smell and taste; slowing of the pulse; urticaria; and partial deafness. More severe symptoms are sudden and complete deafness or blindness (almost always of a temporary character); petechial and vesicular eruptions; epistaxis and hematuria; and sometimes stupor or coma.

If any of these symptoms appear the drug should, of course, be immediately and completely discontinued.

The annoying tinnitus, produced in many people by moderate doses of quinine, can often be relieved by 10-grain doses of sodium bromide, combined with a little ergot.

**Contraindications.**—Quinine is contraindicated in all cases where an idiosyncrasy to its action exists, as well as in gastritis, cystitis, meningitis, epilepsy, cerebritis and middle-ear disease, because it congests and irritates the areas involved.

**Therapeutics.**—Quinine is best known for its prompt and positive action upon the

parasites of *malaria*. In malarious localities it may be administered as a *prophylactic* in daily doses of 3 to 5 grains or weekly doses of 15 to 20 grains, with the possible—but rather remote—danger of developing a type of parasite which is immune to the drug.

In the treatment of tertian or quartan malarial infections it is important that a fair amount of quinine be maintained in the blood at all times. For this reason it is best, in ordinary cases, to give 10 grains every 3 or 4 hours, regularly and continuously, until the patient has been free from fever for at least five days and the blood is free from parasites. If the case is severe and a paroxysm is impending a good-sized dose (15 to 30 grains) should be given at once *in solution in acidulated water*.

The effect of quinine in all types of malaria is greatly enhanced by a clean bowel, and its administration should be preceded or accompanied by brisk catharsis, preferably produced by such drugs as affect the liver, such as calomel; sodium phosphate or podophyllin.

In pernicious or estivo-autumnal malaria the treatment is more difficult. In some cases it is necessary to begin with a large dose—30 to 50 grains—and follow with daily small doses for several months, in order to prevent the parasites from sporulating or hiding themselves in the spleen and bone marrow. Intramuscular or intravenous injections may sometimes be required.

It is well to remember that, in cases of malarial hematuria ("black-water fever"), quinine should not be given unless parasites can be demonstrated in the blood. (Neosphenamine or Warburgh's tincture are better in such cases.)

Small doses of quinine—1 to 3 grains every 2 to 3 hours—are often helpful in the treatment of coryza, influenza and other acute infectious diseases, due to its general tonic effect, the increased phagocytosis and the decrease in tissue waste.

As an *oxytocic* its action is somewhat problematical, but to be on the safe side, it is well not to give quinine to nervous or hysterical women nor to such as have a tendency to abort, when they are pregnant.

As a remedy for *whooping-cough* quinine stands high. The dose is  $1\frac{1}{2}$  grains for every year of the child's age, given at 6 A. M. and at 2 and 10 P. M. A solution of



1 to 2 grains to the ounce, sprayed in the throat with an atomizer, often decreases the paroxysms and lessens the spread of the disease. If a peppermint drop is given before and after the spraying the bitter taste is minimized.

Hare states that when prolonged mental or physical strain is to be endured a dose of 2 to 4 grains of quinine will often support the system and prevent exhaustion.

*Quinidine sulphate*, in doses of 3 to 6 grains three times a day, overcomes *auricular fibrillation* in about 50 percent of cases and lessens its severity in others.

*Administration*.—The best salt of quinine for oral administration is the *hydrochloride*, because of its high alkaloid content and ready solubility. The *dihydrochloride* is more soluble but weaker, and this is also true of the *bisulphate*. The *sulphate*, though most widely used, is the least soluble of all the salts.

The *hydroferrocyanide* and the *arsenate* of quinine are said to produce marked effects in much smaller dosage than do the salts of the mineral acids. These salts are recommended to be given in doses of 1 Milligram (1/64 grain), frequently repeated until the desired effects are produced. Many other salts are used occasionally, and all seem to have some merits.

When given by mouth quinine should be enclosed in some *readily soluble* container, such as a thin gelatin capsule or rice-flour cachet, so that it will be promptly liberated in the stomach or duodenum. To infants too young to swallow a capsule it may be given with fluid extract of licorice and syrup of orange.

Quinine should never be given subcutaneously, on account of the irritation produced, and the danger of abscess.

The *dihydrochloride* or the *hydrochloride* are best adapted to intramuscular or intravenous use and should be given *slowly* in *dilute* solutions. Quinine and urea hydrochloride, in 10-grain doses, does well for intramuscular injections. In giving quinine parenterally the most scrupulous asepsis must be observed, and, as these solutions are difficult to sterilize without an autoclave, it is best to employ for this purpose only such as are put up in ampules ready for use.

Laws of Nature are God's thoughts thinking themselves out in the orbits and tides.—Chas. H. Parkhurst.

The senses are instruments of the mind, and can only report what the mind can conceive and perceive.—Dr. A. B. Jamison.

## U. S. P. X.

Above is the official abbreviation of the Tenth Revision of the United States Pharmacopœia, which went into effect January 1, 1926.

All pharmacists are now supposed to furnish preparations of the strengths prescribed and made according to the formulas contained in the new pharmacopœia.

Few changes have been made in the strength of preparations, the only one of marked and general importance being the reduction of the strength of *ointment of yellow oxide of mercury* from 10 percent to 1 percent. This should be carefully noted.

A number of changes have been made in the official doses, but these are, as a rule, of minor significance to the physician in active practice, who has pretty well decided for himself as to the proper doses to be given in certain circumstances. The dose of the various bismuth salts, for mouth administration, has been increased from 0.5 to 1.0 Gm. The dose of all the volatile oils has been decreased from 0.2 to 0.1 Cc. The official doses of a number of tinctures has been somewhat increased.

Changes in formulas of various drugs and compounds are of interest chiefly to pharmacists. *Sapo Mollis* is again made with linseed oil. Compound syrup of sarsaparilla no longer contains senna. Boric acid ointment is made with yellow wax and ordinary petrolatum, so that its appearance will be quite different than formerly.

A number of articles are added, most of which have been in the *National Formulary* or *New and Nonofficial Remedies* for some time. Some of the interesting ones are: *acetylsalicylic acid*, *amidopyrine*, *arsphenamine* and *nearsphenamine*, *barbital*, *carbon tetrachloride*, *chloramine* and *dichloramine*, *epinephrin*, *chaulmoogra oil* and *ester*, *phenobarbital*, *procaine hydrochloride*, *quinidine sulphate* and *thyroxin*.

A much longer list of articles has been dropped. Some of these disappear merely by a change of name, but a good many seem to be truly eliminated; these include 11 vegetable extracts, 25 fluidextracts, and 15 tinctures, as well as several alkaloids whose salts are retained, the alkaloids rarely or never being used as such. Some of these eliminations follow tardily upon the discontinuance of the use of the preparation by the profession in general. If they have cut out some of our old standbys, we will prob-

ably still continue to use them, anyway, whether they have official sanction or not.

Several interesting changes in official titles are recorded. Phenylcinchoninic acid becomes cinchophen; betaeucaine becomes eucaine; hexamethylenamin becomes methenamin (a relief!); *Liq. hypophysis* becomes pituitary liquid; our old friend, the compound cathartic pill, becomes *Pil. Hydrarg. Chlor. Mit. Comp.*; *saccharum* is *sucrosum*, and *saccharum lactis* is *lactosum*; *Spiritus Aetheris Nitrosi* is changed to *Spiritus Aethylis Nitritus*; and deodorized tincture of opium becomes the official preparation, the old tincture being dropped.

Let us again urge you to call upon your druggist and post yourself concerning the changes with which you should be familiar. He will help you.

We are having several copies of all important changes made and if you want one of these drop us a line and we will be glad to send it.

All Nature is one vast symbolism; every material fact has sheathed within it a spiritual truth.—Chapin.

#### THE DOCTOR OF THE FUTURE

It is interesting to let the mind run along the lines which progress in medicine has followed during the last hundred or two years, or even during the time we ourselves have been in the profession, and then to let it run on ahead of us into speculations as to what medical practice will be like a generation or a century hence.

One doctor, having indulged in this refreshing mental exercise, has set down the results in print. His book is reviewed in the proper department.

He recalls the time when it was believed that every symptom was the distinct expression of some definite and concrete diseased condition of the body structures, and therapeutic efforts were controlled and directed accordingly. He follows the changes in medical thought which led to the belief that perhaps some symptoms—such, perhaps, as fever—might not be due wholly to the disease itself but might be a manifestation of the body's efforts to combat it.

And then he goes a step further and states his conviction—which is, in fact, shared by some deep thinkers in the profession—that the phenomena we observe as symptoms are neither evidences of disease, as such, nor of the body's warfare against it, but are simply normal reactions to life, *distorted* or modified in some way by circumstances, other than physical, which render the normal stimuli of life more difficult to meet; by changes in the sense organs, which exaggerate the normal stimuli of life; by alterations in the nervous system, which cause it to amplify the stimuli passing over it; or by changes in the actual, physical organs which prevent them from responding in the usual and reasonable way to normal stimuli.

We all know that mental worry or fear will often upset the digestive functions; that a friendly pat on a recently-vaccinated arm will provoke a response quite other than that resulting from the same pat applied to the normal arm; that a man suffering from chronic toxemia is seriously disturbed by small noises which are not noticed by healthy people; and that a broken leg cannot respond to the normal stimulus calling for locomotion.

All this sounds as if there might be a considerable amount of sense in this view of the matter.

If we had been able, 25 years ago, to forecast the extent and direction of suburban development around Chicago, we might have purchased, for a few thousand dollars, property which is now worth a million.

If we are able to see the direction in which medical progress is tending we should be able to pitch our tents somewhere along the line of march and be in a position to profit, in many ways, by being "in on the ground floor," as the promoters say.

Such considerations are by no means valueless. The prophets may be right or wrong, but the profits from studying their prophecies are sure, because we are led, thereby, to *think*, and any agency, means or power which causes us to do that is making us more capable, efficient and worth-while physicians and human beings.

# Leading Articles

## Aniline Dyes in the Treatment of Infections\*

By JOHN W. CHURCHMAN, M.D., New York, N.Y.

THE NEED for other antiseptics than the effective ones already in use is less apparent in peace times than when war, expanding both the number and the severity of infected wounds, greatly increases the demands made on surgeons to check the ravages of bacteria in tissues. After every war, therefore, interest in this subject is reawakened and a notable change comes over surgical literature which begins again to abound in publications concerned with new methods and new materials for handling infection.

This reawakening of interest in the old problems was particularly noticeable during and after the recent war and gratifying advances were made under the drive of necessity. Not all that was done was quite so revolutionary as was supposed. The following account of a war wound appears in a book published in 1834, giving the experience of the famous French surgeon, Dupuytren:\*\*

"We had the opportunity to notice a very singular phenomenon produced by irrigations with chlorinated water. This is the almost complete absence of suppuration. M. Dupuytren performed debridement, dressings were made with linen moistened with chlorinated water. The sloughs loosened in small pieces and the wound closed almost without suppuration."

### The Aniline Dyes

The outbreak of the war happened to coincide with a reawakening of interest in the experimental study of the aniline dyes. These substances had, for a number of years, been under scrutiny in the laboratories with interesting results. They were introduced and tested clinically on a large scale during the war and stood the test sufficiently well to warrant further study of their possibilities. Laboratory workers have, therefore, in recent years been busied with investigations of the dyes and their

work has led to important advance in the treatment of infections.

What valuable properties do the aniline dyes possess which are not found in the more commonly used antiseptics?

1.—The aniline dyes have been of value, first, because by employing them either through incorporation in the media upon which bacteria are planted or by the methods of vital staining, investigators in the laboratory have been able to throw new light on the fundamental mechanism of antiseptics. The dyes have, therefore, the high value which attaches to any new instrument of observation. Through their use, five stages in the process of bacteriostasis have been observed; cessation of motility; inhibition of reproduction (or genesisistasis); inhibition of sporulation; suspension of metabolism; death. By varying the type of dye and the species of organism used in the experiment, any or all of these phases may, within limits, be produced more or less at will. This is another way of saying that the dyes are highly selective in their activity.

2.—The second valuable property of the dyes is their selective power. Two main types of selective activity have been observed. One of these is the type exhibited by tri-phenyl-methane dyes (gentian violet and others) which parallels somewhat closely the Gram reaction, since the majority of Gram-positive organisms are much more susceptible to these dyes than the majority of the Gram-negatives. (Fig. 1).

Other dyes exhibit a selective power which, under certain conditions of experiment, is opposite to that just described; and combined bacteriostatic effects may be produced by combining dyes of opposite selective activities, as has been done in the case of the dye called acriviolet. This whole problem of the selective power of dyes is a highly complex one and bristles with difficulties which need not be gone into here. One may say, however, that in the future

\*From the Laboratory of Experimental Therapeutics, Cornell University Medical School.

\*\**Traité Théorique et Pratique des Blessures par Armes de Guerre*. Dupuytren. 1834, Vol. 1, p. 449.

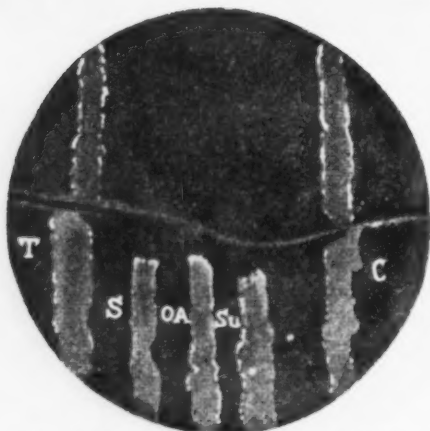


Fig. 1. An Agar Plate made in two halves; the lower half contains plain agar, the upper half agar to which gentian violet in the strength of 1/100,000 has been added. Heavy suspensions of bacteria have been streaked entirely across the plate. Notice that the two Gram-negative organisms (*B. typhosus* and *B. coli*) grow as well in the presence of the dye as on the plain agar, whereas the three Gram-positive organisms (*Staphylococcus aureus*, *Oidium albicans* and *B. subtilis*) though growing perfectly on the plain agar do not grow at all in the presence of the dye.

(T) *B. typhosus*; (c) *B. coli*; (S) *Staphylococcus aureus*; (OA) *Oidium albicans*; (Su) *B. subtilis*.

the selective power of an antiseptic (that is, its adaptability to the particular organism responsible for the infection) will have to be taken into account.

3.—Dyes also possess the very valuable property of inhibiting, even in high dilutions, the growth of bacteria. This phenomenon I have called bacteriostasis and it seems quite probable that it will play a much more important part in the therapeutics of infection since its workings have been investigated in connection with the studies of the aniline dyes than it would before that time. The struggle between the patient and bacteria is usually a close one, and it is easy to understand that substances which do not actually kill bacteria in the dilution employed may, nevertheless, be of use if they prevent their growth. This is not a purely theoretical consideration. I have advanced both experimental and clinical evidence for the belief that the principle of bacteriostasis is a sound one and may prove to be a useful one in therapeutics. A beautiful confirmation of this general idea has recently been provided in studies with the spirochæta pallida. Kolle infected the genitalia of rabbits with the spirochete and then injected into the tissues of the external ear a preparation of bismuth which remained in the ear. It was there permanently. So long as this bismuth

deposit was present, the spirochete lay dormant and failed to develop on account of the inhibitory effect of the small amount of bismuth continually absorbed into the circulation. But, when this bismuth was removed by excision of the deposit in the ear, the spirochete immediately revived and caused the specific lesion. The drug in this instance acted on the growth of the organisms very much as a brake might. When the drug was removed, that is to say, the brake released, the organisms sprang again into activity. Somewhat similar observations were made in my laboratory, years ago, with *B. anthracis*. These observations indicate what is meant by bacteriostasis and point the way to the possibility of the future use of the principle in therapeutics.

4.—Another property of the dyes which has attracted attention to them is their power to penetrate tissues, a power which most of the commonly used antiseptics do not possess. This power I have demonstrated by observations on a human being, the only ones of their kind ever made.

a.—Penetration of the synovial membrane of the human knee. In a patient who required a mid-thigh amputation for gangrene of the large toe, I took the occasion, after anesthesia was induced but before the amputation was started, to inject the knee-joint with gentian violet by a special technic described for the treatment of septic arthritis, and after removal of the leg to fix the synovial membrane by a special technic which guaranteed the retention of the dye by the cells it had penetrated until microscopic examination could be made. Sections of this synovial membrane showed the dye to have stained the nucleus and protoplasm of the endothelial cells and to have penetrated through the mucosal layer to the underlying connective tissue.

b.—Penetration of intestinal mucosa. In recent studies, made to see whether dyes might not be used to diminish the mortality of the formidable operation of colectomy by bringing about sterilization in the loops to be used for anastomosis, it has been possible to demonstrate that these dyes penetrate the mucosa throughout its depth, staining the epithelial cells deeply as far down as the muscularis. There is no evidence that this staining injures the cells in the least. Quite recently the extraordinary observation has been made that the dyes may actually seep through the intestinal wall. In a few cases in which a

segment of sigmoid, isolated between two temporary ligatures, was distended with dye, the dye actually made its way to gauze lying on the peritoneal surface of the bowel. This observation not only illustrates how highly penetrating these substances are but also raises the question whether the intestines are as effective barriers as they are usually thought to be.

5.—The dyes are also relatively non-injurious. It is by no means true to say, as is sometimes done, that while toxic for bacteria they are absolutely nonirritant for tissue cells. Such a statement is, in the very nature of things, an exaggeration, since all substances which are hostile to one form of protoplasm are probably hostile also to other forms if used in sufficient strength. Moreover, the tissues themselves vary somewhat in their susceptibility to the dyes which may be, for example, irritating to the urethra and bladder in strengths which are borne by the synovial membranes without the slightest ill effect. At least it is true that inhibitory effects on bacteria may be produced by dilutions of dye which do no appreciable injury to the tissues; that surfaces may be freed of bacteria by dilutions which cause little or no cellular destruction; and that the circulating blood may even be rendered, at least temporarily, bacteriostatic by the intravenous injection of dyes in strengths which appear to cause no serious lesions. These things can not be said for the other widely used antiseptics.

#### Use of the Dyes

It is of interest to inquire what practical use has been made of the properties of the dyes which have been referred to. First, a word should be said as to which dyes have been most widely employed.

a.—**Acriflavine.** This dye belongs in the acridine group. It was first prepared in Ehrlich's laboratory, but Browning developed its possibilities and introduced it into therapeutics, and it was widely used during the War, particularly in the English Army.

b.—**Gentian Violet.** This dye, and other members of the tri-phenyl-methane group, exhibit in marked degree the selective, penetrative and nonirritant properties already described. It was in the studies with gentian violet that the difference in behavior between the Gram-positive and the Gram-negative groups of organisms was brought out. Gentian violet has been used with a good deal of success in certain types of surface infection and with some promise intravenously.

c.—**Mercurochrome.** This dye, developed in the laboratory of Young, represents an interesting and valuable effort to combine the penetrative power of a dye with the strong bactericidal power of a metal. The substance, as is now well known, has proven of great value in therapeutics and may even be used (though not entirely without risk) intravenously. The presence of mercury, while it undoubtedly enhances bactericidal value, also renders this substance more irritating to certain of the tissues, notably the intestinal mucosa.

d.—**Acriviolet.** This dye represents an effort to combine in one substance two substances which exhibit selective properties that are, in certain respects, the opposite of each other. Gentian violet, as has been said, exhibits a marked predilection for Gram-positive organisms. Acriflavine is, under certain experimental conditions, somewhat more potent against Gram-negative organisms than against certain of the Gram-positives. Acriviolet combines these two dyes and combines their selective properties. It has been tested with somewhat encouraging results in the treatment of surgical infection and is at present the subject of wide trial in therapeutics.

#### Surface Sterilization

Now, what actually can be done with the dyes in the treatment of surface infections? In suitable cases, bacteria can be made to disappear entirely. I have recently demonstrated this in a case of gonorrheal endocervicitis. The patient was referred to me with a well-developed, fresh discharge, loaded with gonococci. She had, some years before, had the Fallopian tubes on both sides ligated, so that I felt free to treat the uterine cavity vigorously without fear of forcing the infection into the peritoneum. Smears made from the thick pus in the vagina showed pus cells containing gonococci in considerable numbers (Fig. 2) and desquamated vaginal cells with masses of Gram-positive rods about them (Fig. 3).

Through a uterine catheter, I carefully irrigated the uterine cavity with copious washings of warm sodium bicarbonate. The vagina was washed thoroughly and the cavity flooded with the same fluid. This was done for the purpose of mechanical cleansing and also in order to alkalinize the surface, since Burke has shown that dyes are most efficient in alkaline solutions. The uterine cavity was then flooded with warm 5/10 percent aqueous acriviolet under pressure, the vagina was packed full with



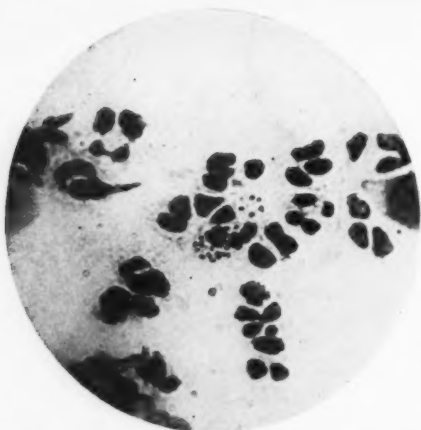


Fig. 2. Vaginal smear showing pus cells and gonococci.

gauze (care being taken to have the gauze in contact with the roof of the cavity, as well as with the floor and sides) and the gauze was soaked in 5/10 percent acriviolet. The labia and urethral orifice were carefully cleansed and thoroughly painted with the dye.

The dye was left in the uterus and vagina for about thirty minutes, the packing was then removed and a small wick soaked in dye was placed in the uterine cavity. A few pieces of wide gauze wrung out in the dye were put in the vagina and a menstrual pad applied. This dressing was removed at the end of 24 hours.

Smears made after three days of such treatment showed complete absence, not only of gonococci but of all normal vaginal bacteria (Fig. 4). The efficacy of acriviolet in surface sterilization, using the rather rough criterion of smear examination, as a test, was thus clearly demonstrated. The Gram-positive bacteria, of course, reappeared when the dye was discontinued, as the vagina is naturally constantly exposed to reinfection.

The effect of the dye on this severe, but in some respects favorable, case of acute gonorrhea was striking. The gonococci reappeared on the 20th day, but under treatment disappeared again and remained away. The last examination was made on the 137th day, after 54 days without treatment.

The discharge disappeared almost at once and did not reappear. The character of the vaginal smear changed from that represented in Figs. 2 and 3 to that shown in Fig. 5. Instead of being composed almost

entirely of pus cells, it came to consist largely of desquamated epithelial cells. I am not at all sure that the favorable results here obtained could be reproduced in a patient whose Fallopian tubes were patent and in whom, therefore, one would hesitate to use the vigorous treatment here employed, but the efficacy of acriviolet in ridding a surface of organisms was amply tested.

#### Joint Infections

This power of the dyes has also been tested in another way. In a number of publications on the treatment of joint infections by lavage and staining, I have shown that the joint cavity may be sterilized. A special technic has been described for the mechanical cleansing of the interior of the knee through a needle, under local anesthesia, and it has been shown that, when this cleansing is followed by staining with gentian violet, the joint may be freed of organisms. One case may be cited.

A boy was admitted to the hospital with a well marked purulent arthritis (temperature  $102^{\circ}$ ), a comminuted fracture of

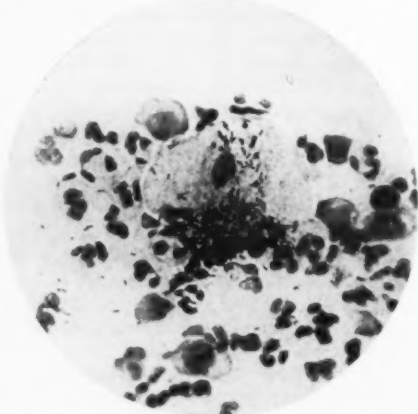


Fig. 3. Vaginal smear showing desquamated epithelial cells and masses of Gram-positive bacteria.

the patella and a large, dirty granulating skin wound below the knee-cap. The condition dated from an elevator accident twenty days before admission. Bloody pus was aspirated from the knee; it contained *S. aureus* in smears and culture. The joint was sterilized by lavage through a needle and staining by means of injected gentian violet. After the granulating wound had been allowed to heal, the joint was opened. The synovial membrane was normal in appearance and cultures from the joint were sterile. The patella was sutured, healing of the bone and skin were absolutely *per*

*primam*, and the patient left the hospital four weeks after operation with an absolutely normal leg.

#### Empyema

That the principle involved in sterilization of joints might be applied elsewhere in the body was suggested at the time of the publications on arthritis and the suggestion has since been followed up by Watters, Major, Davis and others in the treatment of empyema. In the chest, of course, the problem is by no means so simple as in the joints and if the empyema be well established and accompanied by walling-off adhesions, it would be absurd to hope to accomplish anything by aspiration and injection of dye. But, where this is not the case—that is to say, early in the disease when the fluid is quite free—Major and Davis have shown that a great deal may be accomplished.

It is particularly to be emphasized that the power of dyes to inhibit growth, even if the organisms are not killed, may here be of use. Cavities like the chest (we have recently shown that the same is true of the peritoneal cavity) may with impunity be left more or less full of fairly strong solutions of gentian violet and during the several hours when the dye is still present organisms which may not have been killed by staining find it practically impossible to multiply. This use of the bacteriostatic property of antiseptic substances within body cavities seems to be one of great possibilities.

#### Surgical Diphtheria

In 1920, I showed that gentian violet might be used to bring about selective sterilization of granulating wounds. One of the

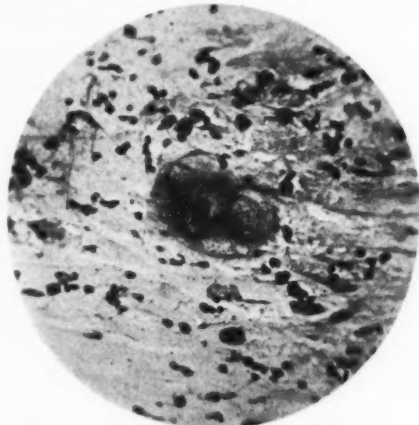


Fig. 4. Vaginal smear after treatment with acrid-violet. Pus cells and desquamated epithelial cells are present but no bacteria whatever are to be seen.

serious post-war problems was the persistence in amputation wounds of infections with *B. diphtheriæ*. Since gentian violet possesses a strong selective inhibitory affinity for this organism, it was thought that it might be possible to free the stumps of the persisting infection. Accordingly, at the Walter Reed Hospital, an attempt was made to sterilize two cases, both of which had been constant carriers of *B. diphtheriæ* for many weeks in spite of vigorous treatment with antitoxin and every known anti-

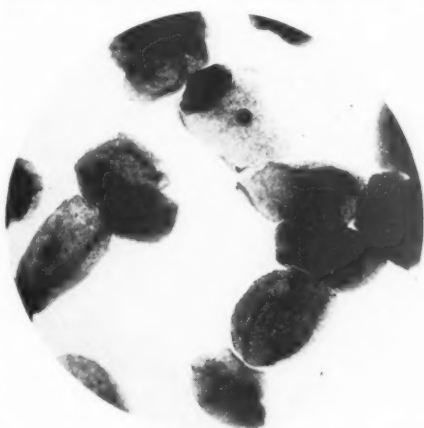


Fig. 5. Vaginal smear after treatment, showing that the pus cells have largely disappeared and the discharge consists of desquamated epithelial cells.

septic. These granulating wounds were meticulously cleansed, mechanically, and daily painted with a saturated aqueous solution of gentian violet. Both were freed of *B. diphtheriæ*—one case in a few days and the other in about two weeks. Infection was also checked in amputation wounds invaded by other types of organisms but it is interesting to note that in wounds infected with *B. coli* it was impossible to get complete sterilization. The selective power of the dye, established by laboratory experiments, was therefore confirmed clinically.

#### Intravenous Use

It was very natural that attempts should be made to use, by the intravenous route, substances with so many advantages and so few disadvantages as the dyes possess. There was, it is true, not much experimental basis for expecting the dyes to accomplish a great deal, but a few clinical attempts were, nevertheless, courageously made to treat septicemia in this way by Young, Smith, Piper and others, and the encouraging results of some of these early attempts have led to a rather extensive trial

of the efficacy of the dyes in this field. In spite of the startling apparent success in many of the cases of septicemia treated in this way, it is impossible at the present time to say just how valuable intravenous therapy with dyes may prove to be. Their injection into the circulation is not entirely without risk, but those who have been most enthusiastic in this field (Young and his co-workers) have felt that, considering the gravity of the malady and our helplessness

in its presence, the risk was small and worth taking.

One thing is certain, the work recently done in the laboratories on the dyes has revived interest in the treatment of septicemia and the light that these studies are beginning to throw on the subject leads us to expect that, in the not very distant future, notable advance will be made in our ability to control these conditions.

## The Use of Nonspecific Protein in the Treatment of Pernicious (?) Anemia

By SAMUEL J. RUBLEY, M.D., Britton, Michigan

**I**N LOOKING over reports published by various writers in different parts of the country, without reference to any particular locality, one is impressed by the amount of literature available on the subject of pernicious anemia. It is encyclopedic. There is no end of literature dealing with etiology, pathology and treatment. However, there is one feature in which nearly all observers are parallel, and that is in the results obtained.

Some cases of pernicious anemia improve without any treatment; other cases yield very grudgingly to the most intensive medication, hospitalization and surgical assistance; while the third class responds not at all and the patient's chapter is closed by a speedy exitus. It is man's never-ending struggle against the unknown—the accumulation of a world of data which will some day be compiled, translated and turned into channels which will push back the “three score years and ten.”

Interpretation of the data now at hand leads one to the conclusion that there are many cases of pernicious anemia, so diagnosed, that are not true to type. We see the patient over so short a period that we fail to grasp the entire situation, and, like the three blind men of India, we all describe the same elephant differently.

Many secondary anemias arising from chronic infections have been treated and cured. The cases considered and reported as pernicious anemia, many times, never were or never would have been such. The treatment which produced results has been exploited until the next case appeared and, on the identical treatment, died as rapidly as was consistent with his anemia. Those cases are not reported.

Pernicious anemia is a striking example of a considerable group of cases characterized by spontaneous variations in the severity of clinical manifestations. Its course is a succession of alternating periods of improvement and failure. Whatever one does during the periods of improvement, be it prayer, injections of arsenic, mercury, blood transfusions, or what not, the patient continues to improve to a certain point. Do the same thing while they are on the down grade and they continue to fail. The interpretation of therapeutic results is extremely difficult, but obviously calls for conservatism rather than joyous acceptance of the idea that any improvement is the direct result of therapy.

Doctor Warfield plead for a more intensive study of cases with a blood picture quite similar to those of idiopathic primary anemia. Should there be any free hydrochloric acid in the stomach contents following a test meal, it is more than probable that the case is not a primary but a septic anemia.

I wish to present two cases, my findings and treatment, with the results up to date. As both are still living, the pictures are still incomplete. I present them “as are”. I do not claim them to be pernicious anemias, which they probably are not; although they have many features in common with that disease. They were entered on my records as pernicious anemia, followed by an interrogation mark. Neither do I claim that my treatment has cured them, but, as Doctors McLaughlin and Starry claim for their mercurochrome treatment, it has helped the blood picture back toward normal.

Case 1. G. U., aged 48; presented himself with pain in the epigastrium. The skin was of a light, lemon-yellow color; the tongue was smooth and soft; urine negative; gastric contents not examined; erythrocytes 1,900,000; leukocytes 3,200.

During the next six weeks, the red cells had dropped to 900,000; epistaxis and hematemesis were almost daily occurrences. During this six-weeks period, every available treatment was used—Fowler's solution, neosarsphenamine, Bland's mass, blood transfusions, etc. His condition became progressively worse.

Eight weeks after the onset, 2.5 Cc. of boiled milk, in the form of lactigen, was given subcutaneously and repeated every three to five days. In the course of sixteen days, his erythrocytes had reached a maximum of 3,200,000. During the next seven days, they dropped to 1,200,000 and the patient appeared to be in *extremis*. Five Cc. of lactigen was administered at this time and on three succeeding occasions. There was an increase of erythrocytes up to 2,000,000. At that date the patient considered himself cured and discharged himself. Since that date (nearly two years ago), he has not stayed in bed a single day but is up and about his business; however, further observations have been impossible. (See Fig. 1).

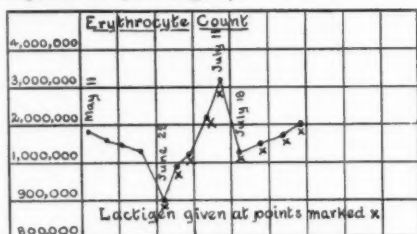


Fig. 1

With apologies for the incompleteness of the data I shall report another case. Bad roads and weather conditions have made it impossible to complete this case.

Case 2. American, housewife; age 64; had influenza four months previous to the first call. Since the attack of influenza, she has been failing gradually. Her bowels have been very costive, with nausea, vomiting and great thirst. The urine was negative. Erythrocytes were 810,000; Hemoglobin less than 40 percent.

Four injections of 5 Cc. of lactigen were given, at three- to five-day intervals. Five weeks after the first injection, the red cells had increased to 1,700,000. The response to protein was slow in this case, yet her convalescence was gradual and uneventful up to a certain point where she was able to be up and about the house; further than that I have been unable to take her. (See Fig. 2).

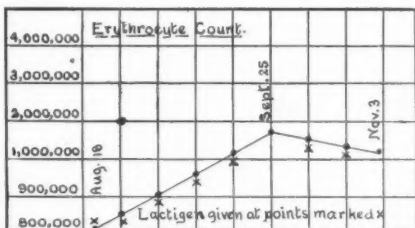


Fig. 2

As a possible explanation of the action of nonspecific protein in these cases, I offer the following diagram (Fig. 3). Whether or not it is the true explanation, I can not say, but it is a working hypothesis.

The bacteria present in the case develop a hemolytic toxin which is the "amboceptor."

The complement is normally present.

The blood corpuscles are normally present.

A combination of corpuscles, complement and amboceptor gives a hemolytic reaction. With the introduction of foreign protein the amboceptor is combined and the hemolytic combination is destroyed.

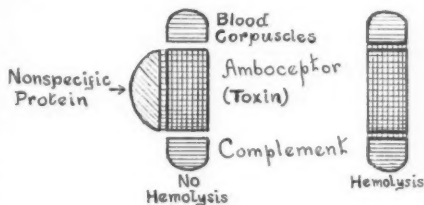


Fig. 3

# The Injection Treatment of Internal Hemorrhoids\*

By WILLIAM H. PRICE, M.D., Brooklyn, N. Y.

IT will soon be half a century since Mitchell, an American physician, discovered how to cure hemorrhoids by injecting them with carbolic acid. This treatment received at once a really large scale trial, and since then many practitioners have used it with success. Nevertheless, this method has today a more promising status in several foreign countries than it has at home. What is the reason?

The treatment began here with a heavy handicap. Its originator did not publish his method; instead he sold it with the "territorial rights" to practice it. It is a truism that among the medical profession any "irregular" procedure, be it ever so useful, encounters stupendous oppositions; a tainted origin may obscure all merit and it may require genius or necessity to discover the actual superiority of a quack remedy to an orthodox practice. The history of medicine contains many records of long stubborn resistance to good things which have been so unlucky as to be favored by charlatans. For instance, the charlatan barber-surgeons were cleansing and dressing wounds with cold water long before the regulars had abandoned the use of hot oil. It required the genius of an Ambroise Paré to discern, at the siege of Metz, that the quacks were getting better healing than the orthodox surgeons. Disregarding the prayers and incantations, that made part of the quack ceremonial, Paré deduced from the results that water was more efficacious than oil.

Since the revival of medical learning, nearly all forms of hydrotherapy have suffered in esteem through having been exploited by charlatans. It has constituted a heavy drag on medical progress that so many valuable therapeutic measures have acquired odium through association with quackery.

The odium acquired by the injection treatment in the first few years of its existence was, from an ethical standpoint, well deserved. The treatment was practiced chiefly by itinerant "specialists," most of them without medical education. These enterprising rogues naturally sold the "secret" they had bought to other rogues,

and as all of them who saw fit were free to make "improvements" on the original method, there were soon a variety of procedures in which either the injection material or the method of using it, or both, were different from those originally used.

These quacks procured, nevertheless, abundant material on which to practice. The layman, having usually little understanding of, or little regard for, medical orthodoxy is often particularly attracted to a therapy that is most anathema to the medical man. The prospect of having their piles cured without operation drew people naturally and irresistibly to nonsurgical treatment, all the more as the treatment stood the pragmatic test—it worked. It was then as it has often been since and as it will always be: sick people wishing to be relieved without being cut apart, even ever so little, gravitate toward bloodless therapy. This is a fact which I suspect no amount of surgical propaganda will ever alter. People of average sensitiveness and imagination dread operations. Nor is our vigorous praise of surgery evidence that these who have experienced it think as highly of it as we do. Deny it as we may, the fear of operation is a natural one and experience has not shown it to be unfounded.

In the 70's and 80's, therefore, the "pile-doctors" made many thousands of injections, and, in spite of the fact that their methods were entirely eclectic, often bungling, generally dirty, and frequently vitiated by ill-advised notions of their own, the injection treatment achieved in their hands a measure of renown that led reputable practitioners to give it a trial. There had naturally been some accidents and some failures; in the circumstances the failures could be explained; the great numbers of cured patients seemed evidence that a method had been used which was deserving of investigation.

Quite naturally, therefore, before the method had been in use many years, it excited attention, especially from rectal surgeons throughout the country, and a few of them resolved to give it a trial.

\*Read before the Carson C. Peck Memorial Hospital staff at its regular monthly meeting, September 17th, 1924.



### Work of Kelsey

Not quite the first of these in point of time, but the most significant for the subsequent fate of the treatment, was Dr. Kelsey, then surgeon for rectal diseases at several New York Hospitals. Ten years after Mitchell had made the first injection with carbolic acid, Kelsey was injecting nearly all patients who came to him with hemorrhoids; in 1885 he had reported more than two hundred successful cures and was unequivocally recommending injection as preferable to operation in nearly all cases of internal hemorrhoids.

After Kelsey's first enthusiastic accounts, there was, so to speak, a turn in his luck. He had, he says, "a succession of bad cases," which decided him to return to the surgical removal of piles, whenever operation was not refused or contraindicated. Kelsey's relation to it was probably the greatest single obstacle in the way of injection therapy for hemorrhoids—more damaging even than its irregular origin. Many who, through his praise or because of some other favorable notice, had begun to use injections forthwith abandoned them. Had he never taken it up, it seems probable that other early investigators would have done so, in whose hands it might have had a more fortunate outcome, and whose prestige would have established it as a permanent remedy.

The fact of Kelsey's disillusionment was impressive; its cause received little notice. Yet, even with the evidence now available, it is not, I think, difficult to obtain a fairly correct notion of why Kelsey's great initial success was followed by a few failures serious enough to turn him against injections. It seems plain from all that he has written that Kelsey never gave the method a systematic trial under conditions fairly uniform. He says that, owing to the individual reactions of his patients, he varied the percentage of carbolic acid injected from 5 to 100 percent, but he never says that he tried out faithfully any particular strength of solution, nor does he give us information from which we can learn, even in a general way, how he treated the cases that failed. When, in 1887, he partially repudiated his previous belief in injection, the reason he emphasizes most is his inability to control sloughing. He says that he could by no means relate sloughing to the strength of the carbolic acid solution; that strong, medium and weak solutions might or might not produce severe slough-

ing; that he could never predict whether piles would slough; never attribute a particular case of sloughing to a particular concentration of carbolic.

If Kelsey's failures were not caused by an unsuitable strength of carbolic acid, then, of course, other factors were at fault. He must, in going from good to bad results, have changed his manner of injecting, the amount of fluid injected, or some other variable factor.

In his "Surgery of the Rectum," 1902, he still speaks of carbolic acid injections with considerable favor but he does not give a formula. Can one doubt that he was uncertain as to what strength to recommend? And is not the suspicion justified that, in his early, successful cases, he had used better methods than in the later cases which proved failures; and that, instead of analysing his results and detecting that the cause of failure was in his change of method, he had adopted the easier way of returning to proved and approximately satisfactory surgical procedures? Working in such a wide range of strengths as from 5 to 100 percent, valid conclusions could have been reached only on the basis of a very large number of observations and much painstaking. But, there is no account of systematic comparisons; on the contrary, the suspicion arises that Kelsey did not follow any consistent plan. Certainly his published case histories are deplorably lacking in definite information, and perhaps he had not preserved for his own use the precise information that would have enabled him to compare exactly the treatment of his successful and unsuccessful cases.

### Other American Workers

Kelsey's defection, serious though it was, was not universally imitated. An earlier protagonist than Kelsey, Dr. Robert W. Martin of Philadelphia, was a more faithful one. Dr. Martin began to use injections in 1877 and from then to the present time several thousand cases were treated by him and his son, Dr. Collier F. Martin, who have used injections almost exclusively for the cure of hemorrhoids. Their technic is a special one, that is, before beginning injections a division of the anal sphincter is done under nitrous oxide anesthesia; the carbolic acid strength is 50 percent of a proprietary preparation of phenol; only one or two piles are injected at a time. This technic has been employed for about forty years. The Martins have not claimed for

injections an intrinsic superiority to surgical treatment, but greater comfort, convenience and cheapness for patients.

Other American practitioners have long records of successful treatment of piles by injection. But, most if not all of those who have used the method faithfully have their own special technic. There has been no experimental work done, and, apparently no cooperative effort has been made to improve the technic or to determine the relative merits or defects of various procedures. It is, I think, due to this lack of cooperative effort in attempts to perfect its technic that, until rather recently, injection therapy for piles has barely held its own in this country since the first year of its recognition among regular practitioners. In consequence, many medical men still suppose that injection of hemorrhoids is a practice exclusively in the hands of quacks.

The status of this treatment among irregulars has changed greatly and, on the whole, for the better. Many large, successful institutions advertise themselves as hospitals for nonoperative treatment of piles. A steady, well-satisfied stream of patients, disregarding the advice of regular physicians, are cured at these places; the itinerant quack has been, to a great extent, replaced by physicians who though "irregular" are nevertheless licensed graduates in medicine. Their work, which doubtless is often good of its kind, is less spectacular than that of the traveling pile-doctor. They can be more easily ignored and, as they lack legitimate channels of communication with other clinicians, their work remains unknown to a very large proportion of the medical profession.

#### Morley's Work in England

In Europe, injection therapy had a more fortunate beginning since its sponsors have been mostly experienced rectal surgeons. In England, the war furnished conditions which led to its obtaining a large scale success in circumstances quite untainted by commercialism or by doctrinaire preferences. Almost from the beginning of the war, hospitals were crowded; places were needed for disabled soldiers and for acutely ill civilians; out-patients to be operated for hemorrhoids waited in vain for beds. Many such patients were making munitions or doing other heavy war work for which their condition unfitted them.

Impressed with the urgent need for their relief, Dr. Arthur S. Morley, a surgeon at St. Mark's Hospital in London, began, soon

after the outbreak of war, to inject some of these patients with carbolic acid, hoping, at best, to relieve them until they could be admitted to the wards for operation. To his great surprise, not only was quick and complete relief obtained but the piles disappeared completely and gave no early signs of recurrence. His success was so great that Morley was soon recommending admission for operation only those cases in which there were found complications such as fissure, fistulae, etc.; all other cases he treated by injection. In his book "Hemorrhoids," published in June, 1923, Morley gives us the results of an experience derived from treating between 3000 and 3500 cases by injecting their piles with carbolic acid.

This experience has produced the conviction that, for all but a few cases, the injection of internal hemorrhoids is the treatment of election. Even certain rectal conditions originally thought to constitute contraindications need not always be classed as such. For example, fissures that are recent and superficial, if they are unaccompanied by polypi or by edematous tags of skin, may be cauterized and the hemorrhoids then injected. On account of its painfulness, this treatment is recommended only for cases where operation is undesirable. He no longer excludes from injection cases with hypertrophy and spasm of the sphincter; a local anesthetic makes the introduction of the speculum quite painless and so renders injection possible for these patients. Partly fibrous piles, at first thought unsuitable for injection, are now sometimes injected in the nonfibrous portion, with the result that they atrophy like other piles.

Morley uses carbolic acid, the substance employed by Mitchell who, so far as is known, was the first ever to inject hemorrhoids. He recommends for most cases 20 percent of carbolic acid in equal parts of glycerine and distilled water. If inflammation of the pile exists; if the patient is unusually sensitive to pain; or where a first injection is followed by severe pain, he uses 10 percent of carbolic acid. The objections he makes to the weaker solution are that the injections have to be repeated oftener and that the piles are more likely to recur. Morley confesses that his objections to solutions containing other ingredients and having other strengths of carbolic acid than 20 percent are "all more or less theoretical, because results with the 20 percent solution of carbolic acid in glycerine and water have

been so uniformly satisfactory that I have resisted the temptation to experiment with any others excepting that, in an occasional case, I use the 10 percent instead." He does, however, express belief in the special merit of glycerine as a solvent because of its hygroscopic property; and especial distrust of oil as a diluent because of the danger that it might reach the general circulation.

#### Technic

He uses an all-metal, modified dental syringe holding 30 minims, enough to inject six hemorrhoids. His needle has a tolerably wide bore, is about half an inch long and is attached to an elbow-shaped socket which permits an unobstructed view of the needle point during the whole operation. With a Kelly sphincteroscope and a good electric headlight, he can throw the light on the exact spot upon which he is working.

With the patient in position, he introduces the well lubricated speculum into which the piles prolapse. The lowest one is injected first in order that, in case of bleeding, other piles will not be in the path of the blood. In the knee-elbow position the lowermost pile is the most anterior one and as this is usually the largest and most prolapsed it is well that it should be the first one injected.

The needle is inserted near the apex of each pile and pushed up along its long axis to near its base. In large piles the whole needle is inserted. The solution is injected slowly, from three to eight drops, according to the size of the pile. The needle is allowed to remain in position at least half a minute, during which the pile will usually swell and whiten, but if this does not happen so quickly it is not an indication for injecting more fluid. In very large piles a second injection should be made into the base, passing the needle into its transverse axis. Care must be taken not to inject too much fluid in all, and not to inject too near the anal valves, an error that may cause severe pain.

About one case in fifty has bleeding that is not controllable by sponge pressure, and injection should never be begun without having a clamp at hand.

Morley injects at intervals of a week with 20 percent solutions; with weaker solutions he shortens the time between injections. The number of his injections average four, the limits being two and six.

No enema and no cathartic are permitted beforehand; patients are asked to empty their bowels as usual; the rectum is then more likely to remain empty and dry than if a cathartic or enema were used.

Unless they are very old, or confined to bed for other causes, Morley treats his patients in his consulting rooms or in the out-patient department of the hospital. They are not prohibited from being at work the same day but are advised not to make severe exertions on the day or evening of the injection. In case of severe pain, they are instructed to go to bed. Patients from as far away as Lincoln and South Wales return home by train the same day that they are injected.

#### Results of Injection

Morley regards injection as indisputably more desirable for the patient than operation. Injection entails less discomfort, anxiety and expense. He thinks that opposition to injection is due partly to the fact that operation is more convenient for the surgeon. He says:

"From the surgeons' point of view it saves much time and trouble to admit a patient to the hospital or to send him into a nursing home and operate on him. In expert hands the operation takes not more than fifteen minutes, whilst well-trained nurses do all the preparatory treatment and attend to most of the after treatment, the surgeon contenting himself, as a rule, with a few perfunctory visits, and perhaps one digital examination before the patient returns to his home. Obviously this is less trouble than seeing the patient four or five times, making the necessary appointments, and so on.....From the point of view of the surgeon to out-patients, treatment by injection, however good its results, means a very great increase of the time his work takes him. It takes perhaps ten seconds to recommend a patient for admission and operation; and five minutes on four or five occasions to inject his piles in the out-patient room. The latter means adding perhaps an hour and a half to each of the surgeon's attendances."

In another place he says:

"That my results from injection at St. Mark's Hospital did not compare unfavorably with those of my colleagues there who operated upon their cases is shown, I think, by the fact that no less than three of the house surgeons, who had ample opportunities of watching both methods of treatment and of comparing them, are now enthusiastic practitioners of the treatment by injection, whilst one of them came to me to have his own hemorrhoids injected.

"Amongst my private cases there has been an altogether disproportionate number of medical men—a point that shows clearly enough that members of our profession it-

self are not inclined to submit to operation if they can avoid it by means of injection. And the majority of these medical men have sent their patients with hemorrhoids to me since being treated themselves, showing that they have been satisfied with the result in their cases."

Morley thinks that the likelihood of recurrence is slightly greater after injection than operation, a disadvantage that he regards as unimportant, inasmuch as patients suffering from a relapse have no hesitation in being re-injected, whereas very few persons who have been operated upon for piles ever submit to a second operation.

He has had no serious after complications; as a rule, pain is absent or very slight; he has had but one case of bleeding difficult to control; there has been little sloughing and no sepsis of the rectum. He says that instrument-makers report a large sale of the instruments he has described and recommended, and we may conclude that, in England, the method is by way of obtaining a decisive trial.

Complications were rare and slight; severe pain occurred only thirteen or fourteen times. Hemorrhage occurred in about one-fourth of 1 percent of his cases. This bleeding, usually slight, was reported by patients at their second visit in all but four cases. In three of these, hemorrhage from a small vessel was controlled by a few minutes' clamping. In only one case, that of a bleeding surface, was a general anesthetic necessary. Morley says that in future, in a case of secondary hemorrhage that offered any difficulty, he would clear out clots and plug the rectum around a large sized drainage tube, leaving the plug in for 36 hours. Apropos of the use of adrenalin or other astringent suppositories, he says that he would always prefer to see bleeding stopped before sending a patient away.

Sloughing of the mucous membrane he saw occasionally. He thinks that it usually follows injecting too much solution or making too superficial an injection. But he also believes that some patients are unable to endure carbolic in any strength, though most persons endure it well. In cases of abnormal sensitiveness the whole pile may slough, whereas the sloughing is usually of the mucous membrane only. The idiosyncrasy of patients toward carbolic acid was one of the stumbling blocks encountered by Kelsey who states that he varied the strength according to the patient's sensitiveness, but omits to give

more specific information. Morley regards sloughing as a most undesirable complication because it may cause considerable pain, necessitates rest in bed and may lead to secondary hemorrhage. He has, however, never seen it associated with sepsis, nor has he had sepsis of the interior of the intestine in any of his cases.

In male patients he finds, occasionally, pain in the bladder and frequent micturition. These patients suffer after each injection but the trouble disappears in a few hours.

#### Recurrences

The frequency of recurrence can be determined accurately only from the history of a large number of unselected cases. In 1920, Morley wrote to 300 consecutive cases whose piles he had injected three or more years previous. They were asked to report on the recurrence of (1) bleeding; (2) prolapse; (3) itching; (4) other rectal symptoms. From 246 replies he calculated that 83.4 percent of the patients had remained free from rectal symptoms. Patients whose replies were in any way ambiguous were excluded from the count. Of the remaining 16.6 percent most of them had no symptoms for over two years. In this category of recurrences are included all cases who report discomfort from a single symptom; the estimate of recurrence is consequently a very liberal one. Had it been based upon the number of patients who returned for operation—as is usual in computing statistics of postoperative recurrence—the number of relapsed cases would have been only about 2 percent.

Judging from the number of cases that come to him for injection after having been previously operated upon, Morley believes that recurrences occur in at least 5 percent of operated cases. Statistics compiled by taking account only of those cases that report for a second operation are manifestly incomplete, since it must happen that many patients in whom recovery has not been permanent fail to return for a second operation.

I have dealt so fully with Morley's work, first, because he has achieved results so exceedingly worth while by methods that he has described very particularly; second because much of his work has been done in an established hospital for rectal disease where it has constituted a departure from the hallowed traditions of operative relief, and has therefore been obliged to meet the test of comparison with operative results

obtained by distinguished, experienced rectal surgeons; and last because, in essentials, Morley's technic approximates the methods I employ—methods for which I predict an early successful future among ourselves. I by no means imagine that the method has reached the limits of perfection and I hope that before long we may begin—on this side—to contribute substantial improvements to this native therapeutic procedure.

#### Personal Experience

I have now, in my private practice, been treating hemorrhoids by phenol injections for three years; and in my clinic at the Cumberland Street Hospital I have been using the same method for the past year. In all some 500 injections have been made.

The procedure employed is that of Morley or the technic taught to me by Dr. J. D. Albright, who has used a method successfully for twenty years. The solutions vary in strength from 5 to 20 percent, Albright using weaker solutions in oil and Morley stronger, in equal parts of glycerine and water.

The percentage of carbolic acid to be chosen for a first injection is determined by the condition found within the rectum. When the hemorrhoids are very vascular, acutely inflamed or when an extensive proctitis exists, treatment should begin with the minimum strength of phenol. In less severe cases, especially in old, considerably fibrosed hemorrhoids, it is advantageous to begin with stronger solutions. I have, therefore, in accordance with the severity of the rectal conditions, begun by injecting 5 to 8 percent of carbolic acid and have observed the patients' reactions as an indication for succeeding injections. In no case should a subsequent injection be made until the inflammation from the previous one has subsided. The intervals between injections should, in any case, be not less than a week. Unless the hemorrhoids disappear promptly, the amount of carbolic in the injected mixture should be increased till the strength reaches 10 to 12 percent; above this I would not venture fearing sloughing. From 5 to 12 injections have been required; the more acute cases which call for weaker solutions needing, as a rule, a greater number. Hemorrhage is usually controlled by the first injection; prolapse by the second.

This method of treating hemorrhoids has proved to be a source of extreme gratification; no cases have failed to respond to it. There is no pain and but slight discomfort.

Patients are correspondingly contented and grateful, particularly those whose hemorrhoids have recurred after operation.

Predicted complications, such as intense pain, extensive sloughing, thrombosis or abscess of the liver have not been observed. In only one case has any considerable pain occurred—a patient in whom a rectal fissure had been overlooked. Sloughing has taken place in some cases where the stronger solutions were used and injected too superficially, but extensive sloughing has not occurred and healing has been rapid and complete.

Precautions to be observed, in so far as they concern treatment, have already been mentioned; namely, the necessity to observe the effects of each treatment and to adjust the time and strength of the next injection to the observed result. But prior to any treatment there is, first of all, the obvious duty of making the most exact diagnosis possible. A careful anal and proctoscopic examination for evidence of fissure, ulceration, polypii, fibromas, papillomas and malignancy should precede any attempt to relieve patients suffering with hemorrhoids.

#### Other Solutions for Injection

Notwithstanding the great excellence of carbolic acid as a medium by which internal hemorrhoids may be caused to disappear, it is not the only substance by which this effect may be produced. It is not even certain that it should always be the preferred medium; there may be special conditions when other substances should be chosen. These are problems concerning which nearly all the exact work yet remains to be done.

One substance which, according to present indications, merits careful trial is alcohol. Its chief protagonist is Dr. Ismar Boas, specialist in gastrointestinal diseases in Berlin and the author of standard books on diagnosis and treatment. His preference for alcohol merits special attention, perhaps, because he has abandoned carbolic acid in its favor. Of carbolic acid injection he says that, although his results were not always satisfactory, he never observed either the abscesses, fistulae, or suppuration described by Kelsey, Agnew, Allingham and others. He used a 25 percent carbolic acid solution in alcohol, 3 to 5 drops to the dose. The treatment was never ambulant, but required three to five days' rest in bed. He considers that the dangers and disadvantages attributed to carbolic injections are greatly exaggerated, and that actual



unfavorable results obtained in this treatment arise largely through faulty technic or improper after-care.

Boas, apparently, is *a priori* opposed to ambulant treatment, and this, perhaps, accounts for the fact that he considers the 8 to 10 days in bed required by his alcohol treatment to be no drawback.

#### Alcohol

Injections are made with 95 percent alcohol and one injection of 0.5 to 1 Cc. suffices. Before injection, the bowels are emptied by a cathartic and an enema; if there is hemorrhage, several previous intrarectal injections of a 5 percent calcium chloride solution are given. Local anesthesia is produced by injecting about the anus 20 Cc. of a 0.5 percent novocaine-adrenalin (procaine-epinephrin) solution, and in case of very large piles, a morphine injection is sometimes given. Finally, by means of a Bier suction apparatus, applied for about twenty minutes, the hemorrhoids are exposed and, with the patient in the knee-elbow position, each one is injected by means of a fine needle pushed deep into the substance of the pile. Care must be taken to have the point of the syringe dry; even traces of alcohol may produce inflammation and necrosis of the mucous membrane. The injections are completed in two or three minutes, and are never required to be interrupted because of pain. The well greased hemorrhoids are returned to the rectum. Patients lie on their backs for twenty-four hours and are kept for four days on a liquid diet. If there is an inclination to bowel movement or increased peristalsis, opium is given occasionally. The fourth or fifth day a cathartic is given and a rectal injection of 30 to 50 Grams of liquid paraffin. The first defecation is usually painless. The patients are then put on an ordinary diet and allowed to be out of bed occasionally; they are usually discharged in 8 to 10 days.

#### Quinine and Urea

Among other injection materials used at present, a solution which seems to give promise and which undoubtedly deserves a careful trial is quinine and urea hydrochloride. Terrell was the first to make use of this substance, after learning from the literature that, when injected into subcutaneous tissue, quinine and urea causes a fibrinous exudate about the blood vessels which narrows their lumen and slows the circulation and, if the exudate is too abund-

ant, causes sloughing of the injected tissue.

After experiments made to find a strength of solution which would cut down the blood supply to hemorrhoids so as to bring about atrophy without sloughing, Terrell uses from 5 to 10 percent solutions of quinine and urea for the cure of chronic internal hemorrhoids in about 50 percent of his cases. He injects only piles with an intact mucous membrane. Owing to an occasional idiosyncrasy to quinine, Terrell injects at first only one pile. If no unpleasant reaction occurs, he subsequently injects several piles at one time and repeats the injection at intervals of three or four days for from four to six weeks. He says that a symptomatic cure may be obtained with a few treatments, but if injections are then discontinued a relapse will occur later.

An interesting method of injecting quinine and urea has been originated by Aaron. He has found that it is not necessary to inject each pile separately; that by infiltrating the rectal tissues the piles in the indurated region disappear. In practice, he infiltrates successively each quarter of the rectal wall with a 5 percent solution of quinine and urea hydrochloride, choosing first the quarter containing the piles giving most trouble from prolapse or bleeding. At intervals of a week he injects each of the four quadrants, thus achieving a cure in three weeks without subjecting patients to pain, great expense or great loss of time. The injection is made a little above the internal sphincter. He injects slowly 5 Cc. of a 5 percent solution; stronger solutions he finds produce sloughing. He has had no recurrences. Aaron says that prolapse of the rectum not due to hemorrhoids is also amenable to this treatment.

Dr. John Dunbar, who has lately published the results of 150 cases injected with carbolic acid at the Royal Infirmary in Glasgow, describes also 40 cases injected with sodium salicylate. He got equally good results from both solutions but observed more pain with the latter.

#### Mechanism of Results

Without knowing precisely either the chemical or histological results of injection, we know that its gross anatomic results are either an aseptic necrosis followed by gradual atrophy of the tumor or a rapid breaking down and sloughing of the pile. Aseptic necrosis with subsequent atrophy is the ideal process; sloughing an accident

to be shunned. Sloughing, it may be presumed, is always due to inappropriate treatment, and the aim of an adequate method is to destroy all hemorrhoids, without exception, by an aseptic necrosis.

The theoretical explanation of the effects of injection pretty generally assumes that injection produces thrombosis within the substance of the pile. This is frequently adduced as an objection to injection, being held to constitute a dangerous process. Boas regards an aseptic thrombosis as the ideal starting point in hemorrhoid disintegration and in no wise constituting a danger of embolism at a distance. Morley considers that injection produces an aseptic inflammatory process of a nature not yet explained; he believes that thrombosis occurs but rarely; that when it does occur, after carbolic injection, acute pain results, and the piles disappear rapidly without the need of subsequent injections. Thrombosis, he thinks, is produced by too strong a solution or the injection of too large a quantity. In spite of the ultimately favorable results, he regards it as very undesirable on account of the severe pain. It seems likely that Boas, who injects 95 percent alcohol, of which one injection suffices, may always produce thrombosis. His use of a local anesthetic would exclude the pain factor observed by Morley when thrombosis is produced by too strong carbolic. It may, therefore, be that, as concerns their own work, both Morley and Boas are right. Terrell's method is calculated to produce atrophy by gradual reduction of the blood supply.

For internal hemorrhoids with free blood circulation, Völcker injects pure carbolic acid in minimal quantities—not more than half a drop. He believes that he produces an aseptic thrombosis by setting up inflammation of the intima. He considers that gangrene and its consequent sloughing is a result of injecting too large amounts, thus causing the mucous membrane to become inflamed. The thrombosed veins are rapidly replaced by connective tissue strands. He keeps patients twenty-four hours in bed. He has never had significant pain, nor evidence of embolism. His results as to permanence are good.

Fortunately, clinical progress has not been obliged to wait on pathological studies. The results of treatment have shown decisively that hemorrhoids may be caused to disappear by injecting them with various solutions, which, in ways unknown,

lead to their destruction. The general effects of such injections are neither dangerous nor inconvenient. Owing to the accident of a disreputable origin and other unfortunate circumstances which combined to leave this treatment for a long time almost entirely in the hands of quacks, injection methods have received little critical study and have undergone only slight technical improvement. As a therapeutic procedure, the method has, notwithstanding, acquired in recent years a much improved status. Instead of but a few isolated practitioners using it under ethical restrictions, there are now many. Still, precisely in the quarter from which this method most needs recognition, it encounters the most formidable opposition. This, I need not say, is the domain of rectal surgery; in the main, surgeons seem inexorably opposed to injection.

#### Opposition of Rectal Surgeons

Their opposition is neither matter for surprise nor for uncritical blame. The three or four decades during which no improvements were taking place in the method of injecting hemorrhoids saw the most stupendous changes in nearly all branches of surgery. Analyzed into its elements, the surgical progress made during this time consists in great extensions and improvements in teaching; in greatly perfected apparatus for diagnosis and practice; in libraries, laboratories, hospitals, professional knowledge and professional skill. All these entities constitute, in the language of economics, a vested interest. To their creation went much toil, much self sacrifice; in their application there is vested much hope and much ambition. Tenacious adherence to the present-day highly perfected surgical procedures for removing hemorrhoids is, thus, in the very nature of things; habit and interest are both opposed to change; surgical removal represents the known and tried—injection the unknown and uncertain.

But, while all allowance may be made for the surgeon's natural preference for operation, we may quite properly censure many surgeons who ought to be better informed for a certain misrepresentation of the facts regarding injection. A conspicuous recent example is to be seen in a textbook of diseases of the rectum, anus and colon, published in 1923. In his chapter on injection of hemorrhoids, the author has so much bad and so little good to say of this method that one must wonder that he would

ever employ it at all and is correspondingly surprised to find him writing that, "The procedure is sometimes curative, and one is justified in risking danger and employing it where, for any reason, the patient declines to submit to a safer and more reliable operation."

This author considers that a permanent cure is obtained in less than 5 percent of cases. He is, presumably, unacquainted with Morley's results or with the success of injection treatment on the hands of other English and continental workers. His unawareness of the recent good results reported from abroad is the more surprising in that, in some cases, their publication antedates by several years the last edition of his book. In March, 1916, Morley, who had already treated an "enormous number of cases," published his results in the *Lancet* (London); and early in 1922 he answered very fully in the *Practitioner* certain objections that had been urged against injection at the meeting of the British Medical Association in July, 1921. In his reply, he gave all the results and statistics of three thousand cases treated between 1915 and 1917, and challenged those in favor of operation to publish their own results and compare their figures with his, both as to recurrence and complications. This challenge has not yet been accepted. In July, 1921, Mr. James Eadie wrote in the *Practitioner*, that his results had led to the conclusion that only those cases of piles in which a speculum cannot be introduced without a general anesthetic should be operated upon. The undisputed claims of long successful treatment by reputable American practitioners, as for example, the Martins, father and son, of Philadelphia, Dr. Eugene Hoyt, Dr. J. D. Albright, Dr. Robin Hood, Dr. Ginnever, Dr. Terrell, Dr. Bassler, Dr. Pennington of Chicago, Dr. Hirschman, Dr. Aaron and others, ought surely to be known to the author of this book.

In Germany, Boas, Völcker, Braatz and others are enthusiastic practitioners of injection. His most natural conclusion is ex-

pressed by Boas in his Book on "Habitual Constipation," the German edition of which antedates the book we are discussing. He says there:

"In all these injection methods a skillful technic and a painstaking attention to details are very important in determining success or failure in the result. When these details are carefully and conscientiously observed, my experience has convinced me that the injection method is in no way inferior to the use of the knife in chronic cases as well as in the recent and mild ones.

"None of these methods offers a guarantee that relapses will not occur and we can readily understand this when we remember how much constipation has to do with the development of piles. When this continues after the removal of the hemorrhoids, or if it returns through neglect of diet, we cannot be surprised if the hemorrhoidal nodules develop anew."

All in all, much of the evidence in favor of treating hemorrhoids by injection is in no sense suspect, and from this evidence it appears that the treatment is neither dangerous, when properly carried out, nor of a transitory benefit except from the same causes that make recurrence probable after any form of treatment.

That, notwithstanding, the method is scarcely ever taught, and that, as a rule, it is recognized only to be condemned are matters that do naturally sometimes produce retaliation among its protagonists. It was seemingly in such a mood of exasperation that Dr. Robin Hood wrote the following:

"For some fifty years, now, carbolic acid, in weak solutions, has been used successfully as an injection for the cure of hemorrhoids. What does the average medical practitioner know about it? Nothing. Why are only surgical methods taught in our medical colleges? Is it possible that it is because proctology is a branch of the surgical department?"

However, to all appearances, unmerited opposition to this method is not likely to be of long duration. The prospects at present indicate that, unless we make haste to improve and establish it on its native soil, injection therapy will soon come back to us from Europe as a highly perfected procedure.

# Introduction of a Catheter into the Abdominal Cavity in Attempted Abortion

By J. A. RIEBEL, M.D., and W. H. CLEVELAND, M.D., Columbus, Ohio

THE LITERATURE is fairly replete with cases in which perforation of the uterus has resulted from the inexpert use of various instruments in attempted abortion. Thus, a case was reported<sup>1</sup> in which, during an attempted criminal abortion, the womb was perforated, and the fetus and placenta were forced into the abdominal cavity.

Hektoen<sup>2</sup> describes a case somewhat similar to the one we wish to present. In this instance a rubber catheter was introduced into the uterus and left for several days; efforts at its removal were unavailing, and, in attempting to remove the placenta, the womb was perforated, and the intestines protruded through the vagina. At autopsy the catheter was found in the abdominal cavity behind the liver.

It is, of course, obvious that the softened condition of the uterine musculature in pregnancy renders these accidents relatively easy. However, it is not at all uncommon that such traumata occur in nonpregnant uteri. Thus Liebecke has collected 44 cases, in the literature, of nonpregnant women who attempted to produce abortion. In these cases the patient, believing herself pregnant, may make efforts the more violent because they are unproductive of the expected result.

Cases have also been recorded in which the patient attempted to abort herself, and, after unsuccessful efforts, presented herself to the physician, when it was found that she had an ectopic pregnancy.

We herewith present an example in which a woman, laboring under the mistaken belief that she was pregnant, introduced a catheter through the vagina into the abdominal cavity.

Case Report.—E. G., white, married, aged 40, was first seen about 1 A. M., June 20, 1925. She stated that, early that evening, she had inserted a sterilized rubber catheter containing a wire into the uterus, with the production of considerable pain, and had then withdrawn the wire, leaving the end of the catheter protruding from the external os. Shortly thereafter, she went for an automobile ride and, on returning, could not find the catheter.

Past and family histories were negative. She had three children, aged seventeen, twenty, and twenty-three. Menstruation

had previously been at 28-day intervals, 5-day duration, and quite regular, but she had missed the period which should have occurred May 26. She denied any previous attempts at abortion.

On manual examination, the vagina and os were found to be empty; there were no signs of blood nor trauma; nor was there softening of the cervix or other evidence of pregnancy. As the patient was comfortable, nothing more was done that night.

The next morning, a manual dilatation under general anesthetic was performed at her home and the uterus carefully explored. It was found to be nonpregnant; the catheter could not be located and no trauma was observed.



Believing that the patient was mistaken, or that she was deceiving us for reasons of her own, she was directed to remain in bed a few days, and report her condition periodically.

She was next seen about July 1, at which time she was carrying out her household duties as usual. She reported that she had remained in bed one week, during which time there had been a normal menstrual period. There had been no discharge of tissue suggesting fetal parts. At that time she complained of severe itching about the external meatus, and some ill-defined pain in the pelvis. A uranalysis was wholly

negative. A mild diuretic was prescribed, which seemed to give relief from the itching for a few days.

She was seen at irregular intervals for the following three weeks, during which she complained of the itching, and occasional cramp-like pains which approximately followed the course of the left ureter, radiating downward into the pelvis. At all times the pulse and temperature were normal.

On July 25 the pains became more severe. On July 28 the Roentgenogram, which is here reproduced, was made. It clearly shows the catheter extending from the right of the symphysis pubis to the left and then upward under the margin of the ribs, with the eye at the upper extremity.

She was admitted to the hospital July 29. At that time there was moderate tenderness in the left lower quadrant, but no rigidity. Pulse, temperature, respiration, and blood-count were normal. The urine was slightly bloody in color, with

many erythrocytes and leucocytes; there was a moderate amount of albumen.

On operation, the catheter was found rolled in the left margin of the omentum. The latter was slightly adherent to the superior margin of the uterus; the upper end of the catheter was opposite the lower pole of the left kidney. The catheter was quite clean inside and out; on later examination it was found to be a No. 12, male, soft-rubber catheter measuring thirteen inches. Other than the adhesion between uterus and omentum, there were no inflammatory changes of any kind within the abdomen; no scar indicating the point of entrance of the catheter was discernible.

There was a moderate amount of purulent drainage from the fourth to the eighth day postoperative; otherwise recovery was uneventful. Menstruation has been normal since operation.

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## Tonic Effects of Ultraviolet Radiations in Children

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THE VALUE of sunshine as a curative agent has always been widely recognized. Medical literature from earliest times is replete with references to the beneficial effects of trips to the sea-shore or mountains, or sojourns in the country, where the convalescent or sufferer from debilitating disease may become reinvigorated by the sunshine and fresh air. Thus, while sunlight was always generally accepted as a therapeutic agent, or, rather, as a valuable adjunct in therapeutics, a search for the scientific basis of its beneficial action was never made until Charcot, in 1859, showed that the effect of certain light rays on the skin is independent of any heating action. A few years later, Downes and Blunt, in 1877, investigating the destructive actions of the sun upon bacteria, demonstrated that it is the light of the sun's rays which is bactericidal, and not the heat. In 1890, Koch called attention to the marked susceptibility of the tubercle bacillus to sunlight.

In 1893, Finsen began his experiments with photo- and heliotherapy in cases of lupus and tuberculides of the skin. He

treated these conditions with radiations from a carbon-arc lamp, and attributed his good results to the ultraviolet rays of the light produced by the carbon-arc. In 1902, Bernhard applied sunlight in the treatment of operation wounds and, later, to tuberculous lesions. A year later, Rollier instituted the systematic application of heliotherapy in surgical tuberculosis.

In the thousands of cases of bone and gland tuberculosis which have since been healed in his clinic, Rollier has placed heliotherapy on a firm scientific basis as an important therapeutic agent. Not only has he shown that sunlight is efficient in the treatment, but that it is also highly efficacious in the prevention of tuberculosis and in the maintenance of cure in cases that were healed.

Rollier and his co-workers also found that sunlight improved the general health of non-tuberculous individuals as well as those with tuberculosis. They observed that an increase in the hemoglobin content of the blood and in the number of erythrocytes could be produced by regular exposure to sunlight under proper conditions. Incident-



ally, they stated that the ultraviolet rays derived from the quartz lamp do not produce this increase in hemoglobin and red cells.

It is now quite generally accepted that Rollier's remarkable results with heliotherapy are due largely to the ultraviolet rays of the sun. Many of his results have been duplicated by treatment with ultraviolet radiations from the mercury-vapor quartz lamp in place of the rays from the entire solar spectrum. Recently, Gerstenberger and Wahl treated a series of cases of peritoneal and glandular tuberculosis in children (cases similar to those treated in such large numbers in Rollier's clinic), with repeated exposures to ultraviolet rays. Their results were highly successful, apparently complete cures being obtained in a majority of cases within a remarkably short time. These writers concluded that, while ultraviolet rays may not be specific for peritoneal and glandular tuberculosis, the resistance of the body is increased by the rays to such an extent that the disease is overcome.

#### Sunshine and Rickets

The role of the sun as an important prophylactic and therapeutic factor in rickets, one of the most common disorders of infancy and childhood, has recently been firmly established. As far back as 1890, Palm, in the *Practitioner*, London, showed the connection between rickets and the absence of sunlight. Rollier, in his work with heliotherapy, did not fail to note the beneficial effects of sunlight on this disease. Hess investigated the seasonal incidence of rickets in New York City, and in his report concluded that the greater incidence of the disease during the winter months was due to the seasonal variations of sunlight. Hulschinsky, shortly before that, showed that, when children suffering from rickets were exposed repeatedly to the rays of the mercury vapor quartz lamp, positive healing was obtained in a remarkably short time. He found that ultraviolet radiations are more effective than natural sunlight or cod-liver oil in the cure and prevention of rickets.

This work has been confirmed by many others. Hess, after his investigations on sunlight and rickets, experimented with the mercury vapor quartz lamp. He showed that exposure to the rays of this lamp rapidly cured active rickets, and was also efficient in preventing the development of the disease in children fed on a rickets-pro-

ducing diet. These investigations proved that solar rays produce metabolic changes in the body, viz., the inorganic phosphate of the blood (always decreased in active rickets) is brought to normal; the calcium likewise is increased. Deficiency of phosphate seems to exert an important influence not only on the nutrition of osseous tissue, but on other tissues in the body. It probably plays a role, secondarily, in immunity or susceptibility to infection, and may be a factor in the seasonal variation of infections. In fact, ultraviolet rays seem necessary to the normal metabolism of the infant.

A similar deduction was made by Powers, and others, in their experiments on the prevention of the development of rickets in rats, by sunlight. They found that the beneficial effects of the sun's rays were not limited to the skeleton, but that there was a systemic improvement, the effect on the bones being but a single manifestation of a general favorable reaction.

Numerous other investigators have also discovered the beneficial influences on the organism of the ultraviolet rays of the solar spectrum. Cramer and Drew found that light stimulates blood-platelet formation, blood-platelets being a defensive mechanism against bacterial infection. Traugott, as a result of his researches on the effect of ultraviolet rays on the blood, determined that, while the red cells were not increased, the leucocytes and lymphocytes were favorably augmented.

Kramer, Casparis and Howland treated a series of cases of rickets with regular exposures to ultraviolet rays and controlled the effects produced, by examination of the blood of these children and by roentgen examination of the bones. They found that the inorganic phosphorus of the blood, which was low before treatment (from 2.7 to 3.2 mg.), gradually increased under the influence of the radiations to a maximum of 6 mg., with the appearance of calcium deposition in the bones.

#### Spasmophilia, Tetany and Other Conditions

In spasmophilia and tetany, ultraviolet radiation has been found just as specific as in rickets. Spasmophilia in infants is characterized by a decreased blood calcium, more marked in tetany, of which spasmophilia is a latent form. It is also characterized by a deficiency of calcium in the brain tissue, and clinically, by extreme irritability of the nervous system to mechanical and electrical stimulation; by

carpopedal spasm (prolonged contractions of the muscles of the extremities); laryngismus stridulus (spasm of the glottis); and general convulsions. Like rickets, it is more common in winter and early spring, and in artificially-fed children. Spasmophilia is amenable to cod-liver oil therapy, just as is rickets, but with the addition of calcium salts. Ultraviolet produces permanent results in these diseases. The blood-calcium is raised, the inorganic phosphate of the blood increased and the metabolism of the infant brought to normal.

In still other conditions in infancy and childhood, the field for ultraviolet rays as a therapeutic agent is vast. Since ultraviolet improves the general condition of the organism, it is indicated in convalescence from severe infections, such as, scarlet fever, measles, whooping cough, and pneumonia. In secondary anemias ultraviolet radiations have greater efficiency than iron and arsenic. In fact, it has been shown that the so-called hematinics have little effect in anemia. But ultraviolet radiations produce a distinct improvement, not by direct action upon the erythrocytes but by a general tonic effect on the body and blood-forming organs.

Ultraviolet radiation, by stimulating blood-platelet formation and increasing the leucocytes and lymphocytes, is especially useful in cases of children with lowered

can be placed in the category of the neuropathic type. They are children who just do not get along well. They are usually underweight, anemic, listless, nervous and irritable. Their appetites are poor, refractory to many articles of diet; they are constipated; they are poor sleepers; they do not gain; they catch cold frequently. In this class of children, ultraviolet radiation has great value. With correction of their physical defects, diet, hygiene and bad habits, and a course of exposures to the mercury vapor quartz lamp, there is usually rapid improvement. Mothers invariably report that the child sleeps better, his general disposition is improved, and he eats with better appetite. A marked gain in weight is also accomplished in most instances.

After some study and investigation of the best technic to pursue in the treatment of cases coming to the office, the following method of treatment was adopted: An initial course of twelve exposures was ordered for each case in which it was thought ultraviolet treatment was indicated. This course amounts to approximately one month's treatment, three exposures a week. The distance of the lamp from the body was always constant, but the duration of exposure was progressively increased from day to day. The table followed may be shown here to illustrate:

TABLE

Distance 30 inches.

Treatment Number	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Minutes of Treatment	2	4	8	12	16	20	24	24	24	30	30	30

resistance to infection. Furunculosis, gastrointestinal infections, and cases of frequent upper-respiratory infection can be helped by regular exposures to ultraviolet rays.

In premature infants, ultraviolet radiation renders excellent service. The tendency to rickets is prevented, resistance to infections is raised, anemia is improved, and assimilation of food increased. In marasmic infants, also, such treatment brings about marked improvement.

#### Neuropathic Children

In the private practice of the pediatrician, there is a large class of patients which

The entire body was rayed, the figures in the time column representing the total exposure apportioned to all sides of the body.

Often a continuation of the treatment for another month or two was thought advisable. In that case a total of 20 minutes for each exposure was maintained throughout. In some cases a second course of treatment was given after a rest period of two to four weeks. In that event the duration of the first exposure after the rest period was usually about 8 or 10 minutes, and rapidly brought up to a total of 20

minutes at succeeding treatments, and that total maintained to the end of the course.

#### Case Reports

Case 1.—S. H., boy, age 3, August 24, weight 26 lbs., 12 oz., height 35½ in. Underheight for age and 15% underweight for height. Neuropathic type. Appetite poor; nervous and irritable; no desire for play; history of cyclic vomiting.

*Examination:* Color poor, rings under eyes, listless; tonsils normal; teeth good; heart and lungs negative; D'Espine's sign, (for enlarged bronchial lymph-nodes) negative.

*Treatment:* Diet and hygiene corrected. Exposures started August 26. On September 26, after 14 exposures, three treatments a week; weight 27 lbs. 14½ oz. (a gain of 1½ oz. in one month). General appearance better. Mother states patient is more lively and less irritable, appetite is improved, and he sleeps better. No recurrence of vomiting during past month, although attacks usually occurred at monthly intervals.

Case 2.—J. C., boy, age 6, March 7, weight 35 lbs. 9½ oz., height 42½ in. Underheight for age and about 20% underweight for height. Neuropathic type. Appetite variable; nervous and temperamental; frequent upper respiratory infections until removal of tonsils and adenoids 5 months previously. Always had cod-liver oil; has also been taking syrup of ferric iodide; diet always properly supervised.

*Examination:* Precocious, rather nervous; anemic; moderate strabismus (wears glasses); teeth good; cervical glands palpable. Heart normal; lungs, D'Espine's sign positive to 4th dorsal vertebra; von Pirquet test, negative.

April 27, after about six weeks of ultraviolet treatment (from 2 to 3 exposures a week), weight 36 lbs. 11 oz. (a gain of 1 lb. 1½ oz.), appetite greatly improved, and general condition better.

Case 3.—J. G., boy, 14 years old, July 2, weight 95 lbs., height 52½ in. Underheight; weight normal for age. Enlarged submaxillary gland on left side. Swelling appeared four months ago, was incised about 8 days later, and drained for some time. Now has indurated swelling under angle of jaw with healed scar from old incision, no fluctuation, no tenderness. Color poor, cheeks sunken. Teeth good; tonsils removed 3 years ago. Heart normal; lungs negative, although family physician gives history of a suspicious area in apex and a cough which is not present at this examination. Patient states that his appetite is good (is taking a tonic before meals).

*Treatment:* 12 general exposures to ultraviolet, three treatments a week. In addition, 3 local exposures to quartz lamp at 6 inches, alternating with 3 x-ray treatments of the gland, during the month. August 22, weight 112 lbs. Swelling has disappeared. Patient looks better and says he feels well. He gained 17 lbs. in 7 weeks.

Case 4.—C. L., girl 8½ months, November 1, weight 7 lbs. 5½ oz. Premature; marantic. Appetite poor, bowels constipated.

December 31, after 2 months' treatment, two to three exposures a week, weight 9 lbs. (a gain of 1 lb. 10½ oz.); general condition correspondingly improved.

Case 5.—W. C., boy, aged 11 months, December 5, weight 22½ lbs. Breast-fed only one month. Cereals and vegetables started at 7 months; cod-liver oil intermittently. Nervous (i.e., easily startled); does not sleep well; head perspires in sleep. Appetite good; bowels regular.

*Examination:* Moderate rachitic rosary, large abdomen, slight epiphyseal enlargement; sits up well; 6 teeth. Mild rickets and tendency to spasmophilia.

*Treatment:* Cod-liver oil continued, diet regulated, and course of ultraviolet started. January 16, after six exposures, weight 23 lbs; mother states that he is less nervous and sleeps better at night; head does not perspire in sleep. Abdomen decreased in size, rosary and epiphyseal enlargements about the same. The following month patient gained 18½ oz., with a corresponding improvement in general health.

#### Summary

1.—Ultraviolet radiation is an efficient therapeutic agent in surgical tuberculosis.

2.—It is almost specific in rickets and spasmophilia of infants.

3.—Ultraviolet radiation is useful in other conditions in children, such as, secondary anemias, malnutrition, marasmus, prematurity, lowered resistance to infections, asthenia following acute infectious diseases, and in the neuropathic child.

4.—It improves the general metabolism of the body, it increases the phosphorous and calcium of the blood, it stimulates the formation of blood-platelets, and increases the leucocytes and lymphocytes.

5.—Ultraviolet is distinctly valuable in many diseases of infancy and childhood, especially because of its general tonic effect upon the organism.

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# Senile Cataract, Ocular Injury, Trachoma, Pterygium and Detachment of the Retina

An Eye Clinic at the Medico-Chirurgical Hospital, Philadelphia

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**S**URGICAL clinics are always of interest but none are of more value to a community than are the eye clinics, because injury or disease of the eye is attended with impairment of vision, and impairment of vision lessens the earning capacity of the patient to a greater degree than any other form of invalidism. Therefore, the procedures available for the restoration of sight, when possible, and the conservation of such sight as remains when complete restoration is impossible must engage the attention of every practitioner, inasmuch as these cases are constantly being brought to his notice. The cases herein reported will serve to emphasize these features very well.

## Senile Cataract

*Case I.—Senile Cataract.* We have on several occasions stressed the preliminary care of the cataract patient awaiting operation, but these points admit of frequent repetition. The preparation consists of a vegetable diet for several weeks prior to the operation and the administration of mercury and chalk, gr. 1, three times a day over a similar period. The presence or absence of conditions attended by cough must be determined and, if such should exist, means must be taken to eliminate such complications. It is also highly essential that the patient have an intact and functioning retina, otherwise the most skillful extraction will be to no purpose as the patient will not see.

Beginning one week previous to the operation, the eye is irrigated three times daily with a boric acid solution (ten grains of boric acid to the ounce of distilled water) followed by the instillation into the culdesac of two drops of a 1 to 1000 nitrate of silver solution. It is to be understood that there are many instances where this does not admit of being carried out, and, when the eyes and the patient are obviously in the best of health, this routine is greatly modified. There are many instances, however, when the determination of the condition of

the blood pressure and of the heart and kidneys some time in advance of the operation will go far toward preventing complications. High blood pressure predisposes to hemorrhage, and should this be intra-ocular, in the course of operation, the result is correspondingly impaired. Impending uremia may likewise be precipitated by the shock incident to this operation. Many times we feel compelled to assume the risk of operation even in the presence of such impending possibilities, but cases presenting such features are not cases of election.

Upon entering the hospital, which is usually the day before the operation, the patient is given a warm bath and a saline laxative and kept in bed so as to acquire repose in the new surroundings. Most of these patients are elderly people and react to a change in their environment. As a rule, they stand restraint poorly and have nervous outbreaks for no apparent reason at all. Allowance must be made for this and the patient's peace of mind must be maintained.

## Preoperative Preparation

The patient's eyebrow is next shaved and the eyelids carefully washed with a mild neutral soap, being careful to avoid any entering the eye. The eyelids and eyelashes are then gently cleansed with benzene by means of an applicator wrapped with cotton. This is followed by the application in a similar manner of a 50-percent grain alcohol solution which is further followed by the application of a ½-percent solution of tincture of iodine, after which the eyeball and culdesac are thoroughly irrigated with a sterile normal salt solution. Cutting of the eyelashes is an additional safeguard against infection, but, since they grow out very rapidly, they induce considerable discomfort long before healing is complete and this may, with safety, be dispensed with. Both eyes are then covered with pads wrung out of 1 to 4000 solution of bichloride of mercury which are permitted to remain until the time of the operation.

After the patient is brought to the operating room and placed upon the table, the eye is again subjected to a series of irrigations, first with sterile boric acid solution, then the benzene, alcohol and tincture of iodine are applied again as in the first preparation, and lastly with a solution of 1 to 4000 bichloride of mercury, varying this at times with a one-half strength normal salt solution. In this final irrigation, complete flushing is desired and to this end the surgeon himself attends to the irrigation using a small flat nozzle which may be inserted beneath the eyelids above and below. The solution is retained in a glass reservoir which an assistant holds at a sufficient height that the solution has some force during its application.

The surgeon's hands are scrubbed freely with soap and water and immersed in alcohol or bichloride solution, or both, before coming in contact with the field of operation. All assistants must be careful to have prepared the hands in the same manner, but rubber gloves are not employed in this clinic. All instruments except the cutting instruments, together with the irrigating nozzles, and hypodermic syringe, are sterilized by boiling. The cutting instruments are immersed in fifty percent alcohol. The other antiseptic solutions have a deleterious effect upon the cutting edges. All persons taking part in the operation are gowned, but respiratory masks are optional in the technic of this clinic.

#### Anesthesia

The eye being prepared, anesthesia is obtained by the instillation of a 5-percent solution of cocaine muriate, using about four drops in the eye for three instillations at three-minute intervals. The operation is begun before the cocaine has had time to dry up the corneal epithelium, which is certain to occur with prolonged cocaine administration. Atropine mydriasis should precede the operation by one hour, using one drop of atropine solution (one grain to three drams of sterile water). In sterilizing eye solutions, especially cocaine, it is better to sterilize the water and container separately and add the alkaloid afterwards, as few of these alkaloids stand excessive heat, and undergo, on heating, changes that impair their action.

A deep injection of novocaine (procaine) solution (2 percent) with adrenalin (epinephrin) is made beneath the skin at the outer canthus and extended above and below. This is followed by a *canthotomy*

in the same situation about ten or fifteen minutes later. This feature of the preparation eliminates "squeezing" on the part of the patient and also allows a greater exposure of the field of operation.

The field having been prepared and anesthesia obtained, the face is covered with a piece of sterilized gauze with an opening sufficiently large to expose the eye to be operated upon. The eye speculum is then introduced.

#### The Operation

The globe is fixed by grasping the conjunctiva below the corneoscleral margin by the fixation forceps, and then may be moved at the surgeon's will. The incision is made by means of a perfectly balanced and very sharp Graefe knife, beginning 1Mm. beyond the cornea and 2 or 3 Mm. below a line drawn across the eye at the upper corneal margin, the incision being not quite equal to one-half the circumference of the cornea. This is known as the "old Moorfields' incision". The counter-puncture is made at a point on the opposite side of the cornea which exactly corresponds with the original puncture. The knife is now worked upward through the cornea by a scimitar sweep, the section terminating close to the iris at the upper corneal margin. At this point a small flap in the conjunctiva is usually made by a second sweep upwards just before the knife emerges. A slow to-and-fro motion may also be used in making the incision. The condition of the knife greatly influences this. The knife should be slowly withdrawn to prevent undue escape of the aqueous with prolapse of the iris.

#### Iridectomy

A simple extraction has some merit, but if an iridectomy is to be included in the operation it is made at this stage. Some prefer to do it as a preliminary operation several weeks in advance, but Dr. Fox sees no advantage in this. The closed iris forceps are introduced into the anterior chamber. The blades of the forceps are now opened and a portion of the iris grasped and slowly drawn through the center of the wound and towards the operator's face. The iris between the cornea and the forceps is now severed by De Wecker scissors. This gives a nice keyhole pupil.

#### Cystotomy and Extraction

Since each cataractous lens is surrounded by a pathologic capsule, it must be ruptured



by an instrument called a cystotome, of which there are several varieties. Dr. Fox uses a modified Jaeger cystotome for this purpose. It is an angular instrument and permits reaching well down behind the iris and deep into the structure of the capsule near the periphery of the lens. In an elaborate study of several cases of *ectopia lentis*, by means of the slit-lamp, this operator demonstrated the necessity of this, as the capsule reaches further into the lens structure than is generally supposed.

In the practical application of this cystotome, Dr. Fox makes a circular incision coursing about near the periphery of the lens with the point of the instrument on either side. Engagement of the point in the lens structure and the subsequent rotation frequently luxates the lens, with most of its capsule entire, into the anterior chamber. This is not constant, and in a fair proportion the lens emerges from its ruptured capsule into the anterior chamber.

The lens is now ready to be expressed. The speculum is now withdrawn and the lids closed. By dextrous manipulation of the thumb and fingers through the closed lids the lens is expressed without any loss of vitreous. This is a marked advantage over the older method of using spoon and spatula which now has a limited field of application. A spatula may be used at this stage to clear the edges of the corneal wound of any shreds of cortical matter.

#### Postoperative Treatment

The pupil having been cleared until it is completely black, the entire field is flushed with warm boric acid solution. If the operation has been without iridectomy a drop of eserine is instilled, but if an iridectomy has been performed, a drop of atropine solution is placed in the eye. An additional safeguard against infection is the instillation of a few drops of a 1 to 5000 bichloride of mercury solution.

The lids are then closed and sterilized petrolatum, or novoform ointment (2 percent) is freely used over both eyes and pads held in place by adhesive plaster are applied. These are especially prepared for this purpose.

A word might be given in passing to a description of the squares of gauze used for the absorption of excessive solution or blood in the ocular operating field. These are  $2\frac{1}{4}$  inches square and are made of three layers of gauze, twenty-two strands to the inch, the three layers being woven together

at each margin so as to form a substantial selvage for each border of the square. This avoids unravelling, which is a distinct disadvantage with ordinary cut squares of gauze.

The eyes having been dressed with a large pad, held in place by adhesive plaster, the operated eye is still further protected by a perforated aluminum shield. Occasionally, when infection is feared, or when there has been unusual traumatism to the wound edges of the cornea, the application of a very small amount of a  $\frac{1}{2}$  to 1 percent solution of trichloroacetic acid on a swab is very beneficial. As a rule these cataract cases are not dressed for four or five days after operation. There are exceptions to this in the presence of complications.

The patient is not operated upon in bed in this clinic, as is done in so many clinics, but is placed upon the table through the medium of the ordinary stretcher carrier, and is transported back again to bed in the same manner. He is permitted a reasonable amount of moving in bed but is especially instructed to keep the head as quiet as possible and to keep his hands away from his face. For this reason the dressing is fastened on the face by plaster and not by bandages that surround the head and cause discomfort. A stray wisp of cotton left on the cornea or upon the patient's nose or ear will do much to impair an uninterrupted recovery. Sometimes the patient is restless, and in such cases, thirty to forty grains of bromide or fifteen grains of veronal (barbital) will bring about repose.

#### Other Cataract Cases

*Case 2.*—While the first case, just reported, occurred in the person of a man who had been a sailor, the second patient was an elderly woman, the subject of *high myopia with a watery vitreous*, and a cataract in the left eye.

The preparation was similar to that in the previous case. The conventional incision was made, but with the addition that the Graefe knife was made to bisect the anterior lens capsule, permitting the lens to luxate into the anterior chamber as the knife emerged from the corneal incision. The speculum was now removed, and the luxated lens was lifted out of the eye by the scoop. The debris was removed by means of a spatula. No iridectomy was performed. Eserine was instilled, the eye was freely irrigated, and the edges of the corneal wound cleared.

This case emphasised the indications for the simple operation without iridectomy. These may be said to be: a soft eye; a prominent eye; deep anterior chamber; high myopia; watery vitreous; in fact, any condition that necessitates an extremely short operation and quick work.

*Case 3.*—This patient also presented himself for the removal of a senile cataract, and the same technic was employed as in Case 1.

Inquiry was made by one of the onlookers as to the necessity of suturing the canthotomy wound upon the conclusion of the operation. This is unnecessary as healing is spontaneous.

#### Ocular Injury

*Case 4.*—This patient, an adult woman, had sustained severe ocular injuries as the result of an automobile accident. Both eyelids of the left eye had been badly lacerated, and there was a large laceration of the sclera below the cornea, with luxation of the lens. The lens had been displaced and presented itself into the laceration of the sclera. It was removed. The opening in the eye had persisted and afforded drainage. The margins of the wound showed evidences of suppurative change but there was no pus demonstrable within the eye. The free drainage probably accounted for this. The patient had been receiving milk injections to combat the infection. Four had already been administered. She had no pain. Milk injections, in this surgeon's experience, are always of value in anterior ocular suppuration.

#### Trachoma

*Case 5.*—*Trachoma* of long duration, in a young man, was presented for the relief of the annoying pannus that persisted. This case had existed over 8 years and had received every form of treatment that is advised for trachoma. It was now in the cicatricial stage and showed very little of the disease in the lids. The cornea, however, showed rather deep involvement and the profusion of enlarged bloodvessels within it prompted the surgeon to make a circumcorneal excision of a strip of conjunctiva—a peridectomy. This was performed under cocaine anesthesia. For a good result it is essential that the conjunctiva be removed close to the corneal edge and that all tags be excised. A roughened and uneven margin is undesirable. No excrescences should be permitted to remain.

*Case 6.*—*Grattage operation for trachoma* was performed upon both eyes in this case. Ether anesthesia having been procured, the edge of the upper lid was grasped by a Darier forceps, a slender long forceps with teeth which fit into openings on the opposite blade of the forceps. This holds the lid securely, and by reason of its long slender shape, permits everting the lid to a second turn. With the fingers and the other instruments only the first turn is possible. This is the secret of the success of the grattage operation. If the remote folds of the conjunctiva are not reached, the disease is certain to persist. By using this forceps the greatest number of the granulations are brought to view. They are now scarified by a three-bladed knife, after which they are vigorously scrubbed with 1 to 2000 bichloride of mercury solution, using a harsh toothbrush for that purpose.

Both eyes were subjected to this procedure in this case, and novoforn ointment and eserine were used. An antiphlogistic lotion was ordered applied. Reaction is not great.

*Case 7.*—*Trachoma* in both eyes of nine years' duration with pronounced pannus. Cornea showed under fluorescein staining that there was still some ulceration. Periotomy was performed on both eyes and the abraded areas of the cornea were touched with 1-percent solution of trichloroacetic acid.

#### Pterygium

*Case 8.*—*Pterygium* in both eyes was the next case for operation, but the condition in only one was considered as desirable for operation at this time.

Under cocaine anesthesia, the growth was separated from the conjunctiva above and below by scissors incision. The conjunctiva above and below were then freely separated from their underlying attachments. Below quite a pouch was made for the reception of the pterygium. A loop suture carrying two needles was passed through the head of the growth. The growth was separated from its underlying attachments on the globe and then, with a knife-edged strabismus hook, the head was deftly severed from its corneal attachment. Then the head of the pterygium was drawn down into the pouch made for it beneath the inferior conjunctiva and securely anchored there by the free ends of the suture previously placed in the head. The edges of the superior and inferior conjunctival flaps were then drawn together by sutures.

### Detachment of the Retina

*Case 9.—Detachment of the retina in a middle-aged man.* This case presented several striking features. In the right eye he had high myopia, cataract and spontaneous detachment. In the left eye, he was blind even to light perception, and had a cataract. His right eye permitted only the counting of fingers. These cases afford the attending surgeon very little encourage-

ment, but puncturing the eye and releasing the subretinal fluid is the procedure indicated. He was getting hot packs in addition.

Doctor Fox's usual practice is to repeat the puncture 9 times and the packs 6 times, considering this an ample trial. He had already had 5 punctures and had shown slight improvement. The puncture is made on the temporal side of the globe well back, using a double-edged paracentesis knife.

## Obstetrical Notes\*

By G. G. THORNTON, M.D., Lebanon, Kentucky

IN AN experience of over 38 years, I think it would be fair to say that I have delivered over 2,300 babies, though my records are not complete.

I have never seen a woman die from postpartum hemorrhage, nor one die from miscarriage.

I have had, as nearly as I can recall from memory, about six cases of puerperal sepsis, two of which died, the others all making a complete recovery. In two of these cases I felt reasonably sure that I knew the cause of the sepsis; in the others I knew nothing except that it happened.

### Puerperal Sepsis

In one case the woman had gonorrhea which she contracted from her husband and by which the baby was made blind; and in the other, a negro, there were twins and the second twin was a transverse presentation. In this case, of course, I had to turn the child.

During the birth of the first child, the woman's bowels acted and my hands became contaminated with the feces and, though I washed them thoroughly, I have always felt that this was the source of infection in her case. She died, but the case due to gonorrhea recovered after a stormy siege. The possibility of fecal infection from the hands emphasizes the importance of a thorough emptying of the bowels, if possible, before delivery.

### Adherent Placenta

I have seen 5 cases of adherent placenta in which it was impossible for me to get anything like all of the placenta away. In

one of these cases I was able, after four or five days, to remove all of the remainder of the placenta, when the patient's temperature promptly subsided. In two of the other cases the women recovered, in my opinion, by the absorption of a considerable quantity of the placental tissue, as it was so firmly adherent that it was impossible to remove it all.

I irrigated the uterus in these cases with antiseptic solutions and used, internally, Fluidextract of echinacea, or one of the proprietary preparations of the drug. These things may not have done much good, but I think that they contributed to the successful outcome.

### Placenta Previa

I have seen only three cases of placenta previa centralis, one of whom died. I have seen several cases of placenta marginalis and partialis, none of whom died.

In theory we would always have the central cases delivered in a hospital or by some one else, but we cannot always do so.

The first symptom of this complication is to find that the woman has been bleeding for several days and (as in my case that died) is sometimes almost dead when first seen.

Recently I saw a case of this kind, with a history of some bleeding for two weeks. They had sent to the doctor for medicine to stop the flow and, when I saw her, the pains were feeble, the cervix only slightly dilated, but dilatable, and with every pain a gush of blood. The woman was the mother of ten children; the father was very timid and could not stay in the room; and the help I had was two young (married) women who had never seen chloroform

\*Read before the Marion County Medical Society, December 16, 1923.

used and who were afraid of it. Here was a case to try one's nerve.

#### Management of a Case

Something had to be done at once. Two lives were at stake. I gave  $\frac{1}{2}$  Cc. of pituitrin and prepared for business with one of the women to give chloroform. I introduced my hand into the vagina and slowly but steadily dilated the cervix and burrowed my way through the placenta and past the head and secured a leg.

I now felt that I was master of the situation and by the bipodalic method I turned and brought the breech down so as to act as a compress, after which there was little more hemorrhage.

The pains were not very expulsive and, owing to delay in delivering the after-coming head, I lost the baby.

#### Pituitrin

Just here I want to say a few words regarding pituitrin, which has been much discussed. It is a great and powerful agent and is a godsend to the general practitioner and a benediction to the woman in some cases, when properly selected and properly used; but, like all agents that are powerful to do good when used wisely, it is also powerful to do harm when used imprudently, whether in the wrong case or in the wrong dose—I mean in too large a dose.

Where the os is rigid, labor has made no advance and the pains are of the nagging kind, it should not, in my opinion, be used. Here is where a hypodermic injection of morphine and hyoscine comes in, in the "twilight-sleep" treatment.

In cases where the cervix is dilated or easily dilatable, with a vertex presentation, and the pains just seem to lack a little "pep", a dose of about  $\frac{1}{4}$  Cc of pituitrin will generally give sufficient tone to the pains to effect delivery within 45 minutes and possibly save the woman hours of suffering and the doctor much time.

If, at the end of an hour, the pains should still need just a little reenforcement, the same dose can be repeated and, in many cases, the use of instruments can be avoided; however, I would say that no attempt should be made to make pituitrin take the place of instruments when their use is indicated.

In my cases, the results from pituitrin have been entirely salutary and fairly dependable, though sometimes, when I have desired its effect most anxiously, it has disappointed me by seeming to have none

at all. It seems that there are some women who give no response to it. Notably so was this the case in one of my placenta previa cases in which I used 2 Cc. without getting any response.

It should always be used in small doses except in extreme cases.

#### Twilight Sleep

I would like to say a word about the "twilight-sleep" which was such a fad a few years ago and widely exploited in the lay magazines. We now hear little about it. Of course, we all know that morphine and hyoscine was the combination used in this treatment. In my opinion it, too, has its field, and an important one, though very limited, in the practice of obstetrics—probably in not more than 4 or 5 percent of the cases we meet with. In my opinion it should be used only in the cases where the pains are tedious and nagging; where the cervix is rigid and the case promises to be very lingering; and where the probabilities are that delivery will not take place for eight or ten hours. In such cases it gives the patient rest and allows labor to progress without wearing her out, gives the doctor a breathing spell and does not have any untoward effect on the baby.

It may sometimes render the use of chloroform unnecessary, though I do not think it should ever be considered as a substitute for it. If it is used, it should be in the first stage of labor and not where the probabilities are that labor will terminate in an hour or two. Chloroform should be used in the latter stages of labor where needed or when desired by the patient. I use it to the obstetrical degree whenever the woman desires it in all cases that need it, but never in ordinary cases where she does not want it or where it is unpleasant for her to breathe. I have never seen any alarming symptoms arise from its use in these cases.

#### Puerperal Convulsions

I have seen many cases of puerperal convulsions, but if I have a chance (as I usually have) I treat them by preventing them. In spite of all we can do there are, however, still some women who will go through pregnancy and not consult a doctor until pains begin and it is in these cases that we usually see convulsions. I now recall only one case that I kept under observation where they developed in spite of treatment.

When convulsions have developed, we have a condition which must be met, and speedily. My sheet anchors are *veratrum viride* and venesection, with chloroform as an adjuvant. I formerly used Norwood's tincture of *veratrum*, in 15 drop doses, hypodermically, and pushed it until the pulse came down to 60 or below. I now use *veratrine*, in 1/15 grain doses, the same way, to effect.

If the convulsions do not cease promptly I then bleed an average woman about a quart or more, and I *measure* it to know just how much I am getting.

A hypodermic injection of morphine will allay the nervousness and aid in stopping the convulsions; and, if the patient can swallow, 15 to 30 grains of chloral hydrate, by mouth, it will do some good and no harm.

It is these cases that cause the attendants to become panicky and require the doctor to keep his composure and do something quickly. My experience justifies me in having confidence in the measures mentioned and I use them with confidence, realizing that I, too, may meet my Waterloo some day.

#### Preparation of Bed for Delivery

One thing that I have never seen discussed in a paper of this kind is the preparation of the bed for a case of confinement. Few of the laity know how to do this, and my experience is that very few of them show a disposition to learn speedily.

Springs with a feather bed make a very undesirable arrangement, a mattress without springs being much better. On this place a clean sheet and then sufficient layers of newspaper to prevent any of the discharges from reaching the sheet. I never place anything under the sheet because, if I can keep the sheet clean I will surely keep the bed clean.

I prepare one side of the bed, well under the patient's shoulders and well down to the foot of the bed. Over this I place a clean sheet, folded to make four thicknesses, or, what is better, an old clean quilt which will be more certain to absorb all of the discharges. If there is not enough thickness on top of the papers to absorb the liquor amnii and the blood it will run off on the bed, so it is better to be sure that we have plenty.

I never put an oilcloth nor a *new* sheet next to the patient, as this will merely cause the discharges to run off on the bed or floor.

With the bed prepared in this way, it is a very easy matter, after the placenta has been removed, to fold the pad on the far side of the patient back against her and then, with a little assistance, have her turn from you, with her back toward you, when you can bathe and clean her and incidentally look for perineal lacerations by direct vision.

If there are no lacerations, slip the pad from under her and apply a vulvar pad to catch the discharges; place some papers, as in the first instance; cover them with a clean sheet, folded four plys; and turn her back.

#### Perineal Lacerations

If there are tears, I make it a rule to repair them on the spot and I generally get almost perfect results, except in those that extend into the rectum. I have seen only four such cases, so far as I remember, of which I attempted to repair two, and another doctor did the same for one. In all these cases there was a failure. My experience with these cases does not make me optimistic about their immediate repair, however desirable that might be.





# Ichthylol in the Treatment and Prevention of Scarlet Fever

By GEORGE H. TIBBINS, M.D., Beech Creek, Pennsylvania

WE ARE all aware that, during the last quarter century, rapid strides have been made in advanced medical sciences, not only in the actual cure of disease but also in its prevention, so that we must all concede that the methods of prevention of dissemination have accomplished far more for the welfare of the human family than all the curative methods combined. This is particularly true of septic infections in general and of scarlet fever in particular. In these septic infections, we have been shown what the causes are, how they may be conveyed from patient to patient and how the spread of these diseases may be prevented. But little advance has been made in the prevention of dissemination of some other infections, even though the causes are more or less known, because means to prevent their dissemination are not at our command.

About five years ago, the writer commenced, in a limited way, the use of a 10-percent ichthylol ointment as a treatment and prophylactic in scarlet fever. This was used successfully in a few instances where sporadic cases existed. I did not have the opportunity to put it into general use until the winter and spring of 1925, or during our recent epidemic in central Pennsylvania, when there was plenty of clinical material. Of all the cases in which I used the ichthylol for treatment and immunization purposes, I had not a single failure; that is, in every family where one or more cases existed and the ointment was thoroughly applied as directed, twice daily, the rest of the family remained immune to the disease although they freely intermingled. In all the exposed families, where the disease had not yet existed and the ichthylol was used according to directions, no cases developed in a single instance. This treatment does not interfere in any way with the use of the specific serum, if that is available.

The mode of applying is to anoint the cervical region of the neck, rubbing it in well with massage, twice daily, morning and night. For curative purposes, where the patient has already contracted the disease, the ointment is used lightly wherever the

eruption appears and freely rubbed into the cervical regions of the neck twice daily. The ointment is a material aid in the desquamation process and mitigates the intense itching and burning of the eruption and a very distinct fall in temperature is produced by allaying the irritation of the skin in this manner.

The only objection to its use, I have found, is its staining qualities which may be overcome by applying gauze or old muslin over the parts treated and the wearing of old clothes during the treatment.

My method of preparing the ointment is as follows: Take a ten-pound can of vaseline, petroleum jelly or *petrolatum spissum*, whichever you wish to call it; remove one pound; heat to a liquid; add a one-pound package ichthylol; mix thoroughly; then set the can in a pail of cold water, stirring until cold. Smaller quantities may be prepared in the same proportions.

I will cite only a few cases in which I have used this remedy.

*Family of A. B.*, composed of two children. George, age 5 years, had a very typical case of scarlet fever, with otitis media, both ears; cervical glands greatly swollen; discharge with sickening odor from both ears and glands. Promptly recovered by the persistent use of ichthylol ointment, warmed and applied freely. Bettie, age 3 years, after prompt use of the ointment, did not subsequently contract the disease although she was constantly by George's bedside.

*Family of A. M.*, composed of four children. Ruthel, age 14; typical case with prompt recovery following ichthylol treatment. Other children, aged 12, 9, and 5, after being immunized with ichthylol, did not subsequently contract the disease.

*Family of H. C.*, composed of five children. Ruth, age 17 years—a typical case—made an uninterrupted recovery with ichthylol pushed to the limit. Other children, aged 14, 11, 6, and 4, did not subsequently contract the disease after being thoroughly massaged with the ointment.

*Family of L. W.*, composed of three children. Susan, age 10, typical case. Recovery prompt. Ichthylol used freely. Other children, aged 15 and 20, did not develop the disease later, following ichthylol immunization.

*Family of T. S.*, composed of three children. Robert, age 4 years, a typical otitis media case with great hypertrophy of the cervical glands and foul discharge from ears, promptly recovered after repeated in-

unctions of ichthyol ointment. Other children, aged 6 and 8, did not subsequently take the disease after the use of ichthyol.

*Family of L. Y.*, composed of 9 children. Calvin, age 5 months, and Clair, age 6 years, had typical anginoid cases. Complete and rapid recovery with ichthyol treatment. Other children, aged 7, 8, 11, 12, 13, 14, and 16 years, did not subsequently contract the disease, ichthyol having been freely used in all the cases.

*Family of H. F.*, composed of 3 boys. Robert, age 8 years, positive anginoid case. Ichthyol promptly and thoroughly used, recovery being rapid. Other children, aged 11 and 17, did not subsequently contract the disease, ichthyol having been used early.

*Family of M. G.*, composed of four children. Emery, age 5 years. Genuine anginoid type; recovery somewhat retarded by kidney involvement, although final results were excellent with no spasmophilia. Ichthyol warmed and applied early and often. Other children, aged 3, 4, and 7 years, did not contract the disease after being thoroughly rubbed with the ointment twice daily in cervical regions of neck.

*Family of S. W.*, composed of five children. (This was a family attended by my brother, Dr. P. McDowell Tibbins.) Sarah, age 16 years, Harry, age 13 years, and Dorothy, age 7 years, contracted the disease one after another in the order named, all being typical cases. At this stage, my

brother was called out of town over the week-end and the cases were referred to me. Twin boys, aged 9 months, after being given vigorous treatment with inunctions of warm ichthyol ointment over the cervical glands of the neck, did not subsequently contract the disease and remain well at this writing, some five weeks later.

For the sore throat and for antisepticizing the nose, throat and mouth, I use mentholated calcium creosote compound, undiluted, and obtain excellent results.

For the pain of otitis media, I have the external auditory canal irrigated with water as hot as the child can bear it, and then the following solution, warmed and well shaken, instilled in ears: Equal parts of paregoric and olive oil, to which has been added one drop of carbolic acid to each dram of the mixture. This unsightly preparation, which would make a modern drug clerk blush with shame, nevertheless does the work, and, of course, results are what we are after, after all.

Do not forget the words of the immortal Holt, "The important sequelae of scarlet fever are deafness and nephritis. Death stalks on its trail and many mutes follow in its wake."

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*IT IS THE nature of man, as distinguished from the beasts, that he can by conscious effort better his standing in the material world. Characteristically a man is a worker, a creator of values, a world-maker. He alone, of all living things, can conceive designs and execute them, can imagine conditions that do not exist and then by patience bring them to pass. To take the world wholly as one finds it and leave it so, is brutal. A man is a man only because he is a wealth-producer, an enricher of existence.—Charles Ferguson.*



# Surgical Seminar

Conducted by GUSTAVUS M. BLECH, M.D.

[Note: The Seminar is devoted entirely to the practical interests of surgeons. Problems and their discussions are solicited. Contributors must give their names, but whenever desired these will not be published. Questions intended for this department should not exceed fifty words. Address all communications for the Seminar to Dr. G. M. Blech, 108 North State Street, Chicago.]

## Appendicitis (Continued)

The principal problem of appendicitis concerns its diagnosis, by which is meant not only the mere recognition of the disease in either its acute or chronic form, but the proper estimate of the pathologic process involved.

It is fortunate that in most instances the diagnosis of acute appendicitis is easily made by any experienced physician, but it is also true that not infrequently one encounters apparently insurmountable obstacles. In chronic appendicitis, too, there are a number of vexing difficulties which are not always solved with ease or certainty.

In every suspected case of acute appendicitis careful history taking is of great importance. The patients are in no position to furnish all important data, because whatever prodromal symptoms they may have had in the past have been too unimportant in their own estimation to be remembered. The history must be elicited by direct questioning. As a general rule the anamnesis will show a previous history of prolonged indigestion, and if the common experiences of all surgeons of the world with chronic and intermittent indigestion could be collated we would obtain a very large and interesting volume.

The majority of patients give a plain and distinct history of stubborn constipation, with or without periodic attacks of intestinal catarrh. Many patients complain that they had colicky pains, vaguely placed in the middle of the transverse colon, while others will give a story of digestive trouble, nervousness, tingling of the extremities, headaches, anorexia, loss of weight, insomnia and a general sense of mental depression. Careful examination

would, doubtless, have led to the diagnosis of appendicitis and an appendicectomy would have rid the sufferers of the digestive distress and strain of nervous phenomena in a few days.

As we shall stress this in greater detail when we come to discuss chronic appendicitis we shall now take up a typical attack of "mild" acute appendicitis.

The patient complains that he suffers from colicky pains and, in the overwhelming majority of instances, will himself point to the right lower quadrant of the abdomen as the seat of his trouble. The pains are described as appearing suddenly and are boring in character, driving the patient to the toilet. As a general proposition a good bowel movement follows such an attack. It is important to remember that a good fecal movement is not inconsistent with the presence of an acutely inflamed appendix, though many practitioners seem to hold the belief that appendicitis and obstipation are invariably associated.

The attack is very often FOLLOWED by nausea and vomiting, which latter appears only once. We have purposely capitalized the word "followed" because in digestive disturbances of the stomach, nausea and vomiting *precede* painful attacks, while in the affection under discussion the reverse is the case, in fact, so regularly that I for one consider this sequence almost pathognomonic of appendicitis.

Nevertheless, there always remains an element or doubt both in the minds of patients and attending physicians when a case as just described occurs. The symptoms are indeed rather mild, the vomiting has occurred only once and a tentative administration of morphine, hypodermically, results in complete freedom from all symptoms within twenty-four hours.

When this takes place one naturally is inclined to take credit for having been conservative and for having saved a patient from an unnecessary operation. If, however, one could follow such patients for a year or longer, one would learn that

some surgeon was called in later and had to perform appendicectomy.

But one is not even sure of the "mildness" of an attack. Just three weeks previous to this writing a man came to my house, after having driven about fifteen miles through Chicago streets, and walked up to my apartment. He had been ill for a few hours with typical colicky pains. There was no muscular defense; his pulse was practically normal; his tongue moist. He had had a good bowel movement before he came to see me, and after the physical examination he smoked his cigar as if he had not a care. There was something in his appearance, however, which indicated that the man was toxic so, in spite of his apparent well-being, I advised immediate operation. The patient consented. I took him to the hospital. An hour after his admission I opened the abdomen and was astonished to find a pus-filled appendix with fluid in the peritoneal cavity and the colon and adjacent structures degenerated by inflammatory processes which made suturing a difficult procedure. The patient had admitted several similar attacks, but there was nothing, clinically, to indicate the gravity of the situation, so much that I doubted whether the patient would not flatly decline to heed my advice. He was rewarded for his decision by a speedy and perfect recovery.

A "severe" acute attack almost invariably begins suddenly in the midst of otherwise excellent health. The patient very often has a chilly sensation or a pronounced chill; a rise of temperature; pains in the abdomen which, at first, are placed at the umbilicus but soon are referred to the ileocecal region. Vomiting is repeated now. The right side is sensitive to palpation as compared with the opposite side of the abdomen. To avoid the possibility of error all physicians and surgeons should make it a rule to begin the abdominal examination on the left side and glide the palpating fingers slowly and gradually over to the right side. The element of nervousness can then be ruled out definitely. One can press against the bowels on the healthy side without eliciting any complaint on the part of the patient, but the right side will prove sensitive.

Supposing we have such a case. What is the therapy? What is the prognosis? I have already shown that, clinically and on one examination only, we are at sea as regards a proper estimate of the pathologic process involved. An acute catarrhal

appendicitis may give all the symptoms and objective evidence described, and disappear in one day, without any particular treatment except rest in bed, abstinence from food and drink and an ice-bag over the ileocecal region. That this happens again and again is indisputable; but to determine in advance that it will, is, to my mind, physically impossible.

Personally, I council immediate operation, even in cases where the severity of the attack is only comparatively moderate, so that one is justified in diagnosing the catarrhal form of inflammation of the appendix; but I never make such a diagnosis any more, for in any number of instances that have come under my observation, even some time after the acute attack had subsided, I found evidence of pus infection in the vermiform appendix.

If, for some reason or other, a conservative course is decided upon, the best advice that can be given is to watch each patient with extreme care, for if the symptoms do not lessen within twenty-four hours, operative therapy will still save life.

But we have acute attacks of appendicitis still graver in character ranging from the type just described to a foudroyant type, in which operation very often comes too late to save life, no matter how early a surgeon is called to intervene.

What guides have we to recognize the gravity of an abdominal infection still localized in the appendix?

A reader of the Seminar has asked me to give as clearly as possible the diagnostic value of the x-rays and the leucocyte count. The roentgenologic examination is out of place in acute cases for a number of reasons. In chronic cases it may convey a faint idea of the size and location of the appendix, but, in my opinion, is too unreliable for us to place dependence upon it.

The value of a differential blood count is indisputable but, in my opinion at least, is of secondary importance in the estimation of situations. Throughout my career of over thirty years I have learned to depend entirely on three things; first the character of the pulse; second, the relation of the temperature to the pulse; and, third, the *facies*, as my guides to what is taking place in all acute abdominal infections. These I will discuss in the order mentioned.

(To be Continued)

## Problem No. 2

Presented by Dr. M. O. Robertson, Bedford, Ind.

Female, aged 56, married, sterile, menopause 10 years ago. She had no pelvic or genitourinary disturbance either before or after the appearance of the menopause. With the exception of typhoid fever of three weeks' duration about ten years ago her previous history is entirely negative. About a year ago she had her teeth extracted and claims to have been nauseated from the gas anesthesia. She believes that she has not felt well from that day. Her family informed the examiner that she had been "going down" for some months before the extraction of the teeth and that she had lost considerable weight. For two weeks the members of her family noticed that the patient was jaundiced and two days before she was seen she complained of cramp-like pains during defecation, vomiting and nausea. After some mucoid and milky material was ejected from the stomach, the patient felt better, dressed and went about the house. The following day she was up and about.

The next day she remained in bed and medical advice sought by the husband was accepted by the patient.

**Examination:** The patient looked sick and was icteric; pulse 120, full and strong; respiration 28; temperature normal. The chest appeared normal, but the abdomen was distended without there being any muscular rigidity. In addition to the tympanites there was a slight edema of the abdominal wall. Bimanual abdominal and rectal examinations showed nothing abnormal. Treatment ordered was rest in bed, appropriate diet, a cholagog cathartic and intestinal antiseptics.

The following day the condition remained unchanged except for some nausea, easily controlled by the administration of calomel placed on the tongue. The improvement lasted until the following afternoon, when the previously intelligent patient was found stuporous and unable to answer questions intelligently. Deep abdominal palpation caused the patient merely to change position.

A consultant who had been summoned did not consider the situation serious and believed that the mental condition would clear up after brisk elimination.

As the patient refused to take medicines and nourishment by mouth, concentrated magnesium sulphate was administered per rectum. The coma, however, persisted and

the patient died four days after the first consultation.

The urine in this case was obtained by catheterization and was entirely free from albumin and sugar, but contained some bile.

**Requirement:** Diagnosis and treatment, if any.

## Error No. 2

A girl about sixteen years old began to complain of pains in her right lower abdomen. The pains were not colicky in character but constant and lasted for two days, when they disappeared.

Her mother, who had diagnosed the case as an ordinary one of "belly-ache," gave the patient some herbs which she prepared as an infusion or decoction, and ascribed the termination of the trouble to her skill as an herbalist.

In about a month the attack was repeated, this time a little more severe in character. Again the mother prepared an infusion, but as the effect was not quite so good as on the previous occasion a physician was called in, who found some tenderness in the right side of the abdomen. The physician diagnosed chronic recurrent appendicitis, merely on the history as given and on the finding of tenderness. He advised an operation but the patient as well as her family protested against such a plan of treatment. Hot applications for one day brought about a complete cure, so far as the symptoms were concerned.

About a month later the patient had another attack and this time she actually screamed with pain. Again the physician was called in, and this time he made a more extensive examination and took a better history.

The previous history was negative, as was the family history. The young girl was fully developed physically and mentally, but had never menstruated. Her pulse was 90, temperature 99 degree F. and respiration 20. Tongue was clear. The patient had a good appetite, but ate little on account of the pains in her abdomen. Her bowels had moved regularly throughout all attacks. The stools were well formed but rather offensive in odor. There was a slight inclination to nausea several times daily but never any vomiting nor retching. The expression of the face was entirely normal except for the influence of the pains. The patient herself pointed to the right side of the abdomen as being the seat of her trouble. Except for some sensitiveness to pressure, low down to the right side, there was nothing



ing abnormal. Chest examination was negative as was a chemical and microscopical examination of the urine. The laboratory report was interesting in that there were very few epithelial cells present. Rectal examination was declined by the patient and a request to be allowed to make a vaginal examination was vehemently opposed by the mother because the girl was beyond doubt a *virgo intacta*.

Being unable to obtain further data, the physician made again a diagnosis of recurrent appendicitis and proposed operation in no uncertain terms. Consultation was requested and accepted.

An experienced surgeon obtained the data as above given, but took the physician aside and told him that the case was NOT appendicitis and never had been. He made an entirely different diagnosis and a subsequent minor operation confirmed his diagnosis.

The attending physician had erred.

*Requirement:* (a) Wherein did the attending physician err? (b) What in your opinion was the correct diagnosis?

#### Questions Answered

*Dr. L., Illinois,* writes: I was unfortunate enough to be called in to attend a bad case of compound fracture of the right femur of a girl about 22, a domestic. In spite of careful antiseptic precautions there was some discharge from the wound after splinting and dressing. Repeated attempts to

obtain good apposition failed and in consultation with another surgeon it was decided to wire the fragments. This was done in our local hospital under the best possible aseptic condition.

About eight days after the operation there was a profuse discharge from the operative wound. We at once began to inject all sorts of antiseptics into the wound channel, but the suppuration did not stop. Even bismuth paste brought no amelioration. To cap the climax seven weeks after the operation there was nonunion of the fracture, resulting in a pronounced and disheartening pseudarthrosis.

We rubbed the fragments, we threw in cauterizing solutions, in short we irritated the fractured surfaces by any and all known methods, but after four additional weeks the discharge, containing principally staphylococci, and the pseudarthrosis persists. The girl, while frail, is free from syphilis or tuberculosis and previous to her accident was in fair health and rendering satisfactory service as a domestic. Now she is bedridden.

What can be done?

*Answer:* We have sent the inquirer our advice and we are glad to report that the patient was cured in three weeks. As this case represents somewhat the character of a therapeutic problem, we request our readers to send in their suggestions under the title "Query No. 4."

**N**EVER FAIL to make a blood examination and the differential leucocyte count if you have any doubt as to whether it is an acute inflammatory condition or not.

**I**F YOU HAVE MADE a diagnosis of intestinal obstruction, get ready to open the abdomen—don't wait to determine the cause.

**B**EAR IN MIND the relation of the right ovary to the appendix; they are often in contact—and do not make a diagnosis of appendicitis without excluding "ovaritis", etc.

**D**O NOT FORGET that frequency of urination and ardor urinae are common in affections of the appendix, adnexa, and lower bowel.

*Bernays: "Golden Rules of Surgery"*

# Clinical Notes and Practical Suggestions

## Active Principles in Medicine

The evolution of active principle therapy began in the early part of the last century when strychnine was isolated from nuxvomica and it has grown to such proportions that a large percentage of the medical profession is now using these substances in their practice every day.

The active principles are all medicines that have been chemically brought to their ultimate medicinal substances and then physiologically tested so as to find their value in correcting pathological conditions. The fact is then established by actual clinical observation, that the drug so tested will do the same thing, under the same conditions, not only occasionally but always.

Prior to 1866, quinine, morphine and strychnine, in the order named, were practically the only vegetable active principles used by the medical profession. It was about this time that Prof. Burggraefe of Ghent, Belgium, published his experience with the active principles of botanical drugs. He made the mistake of giving a new name to his findings, which occasioned much antagonism.

Due to the interest awakened by the Belgian physician, chemists began investigating, and it soon developed why the practice of medicine had been an art rather than a science up to that time. It became patent that the use of crude drugs was illogical and unscientific because each drug was a compound made up of several active principles, combined with inert matter, in ever-changing proportions and for this reason it was impossible to establish even an average dose.

Opium, for instance, is as variable as the people through whose hands it passes from the plant to the chemist who tests it. It contains twenty-seven alkaloids. Three great groups of these give it its value as a medicine: first, the narcotics, embracing *morphine*, *codeine*, and *narcotine*, each of these varying in its action; second, the sudorific and febrifuge, *narcotine*, so named,

as I presume the late Mark Twain would say, because it does not produce narcosis, its action being similar to that of the de-fervescents, its after-effects resembling those of quinine; third, the *thebaine* group, which simulate the effects of strychnine and brucine in producing tetanic spasms.

In the records of the Cook County Medical Society may be found a case which illustrates the action of the thebaine group. A prominent obstetrician reported a case of the death of an infant two days old, following the administration of forty-five drops of deodorized tincture of opium to the mother, in divided doses; he also referred to a similar case in the practice of a friend. Both children died in tetanic spasms.

It is useless to multiply examples, and, yet, the drug *pilocarpus pinnatifolius* offers such a marked example of this antagonism of its active principles that we cannot avoid describing it.

The *pilocarpine* has a marked effect upon all excretory glands, largely increasing their action; while *jaborine*, on the contrary, acts, by drying up the secretions.

The active principles comprise the alkaloids, glucocides and concentrations of botanical drugs; the salts of metals and alkaline earths; and the several synthetics, built up from mineral sources into definite chemical and medicinal units which may become official in the national pharmacopoeia. All of these are physiologically tested to determine their effects upon normal physical and organic structures.

It is claimed that some of the alkaloids are highly poisonous. This is true only in a relative sense, as all digestible or absorbable materials that may be taken into the stomach are poisonous if given in sufficient doses, and the alkaloids in no wise differ from other substances. Aconitine, 1/800 grain, may be repeated every fifteen minutes until effect; amidopyrine, 3½ grains, may be repeated *pro re nata*; atropine 1/250 grain, may be repeated every half

hour until effect; any of these given in excessive doses, by mouth or with the hypodermic syringe, may prove fatal.

The statements of Dr. Burggraave have been verified by many clinical reports in this journal; at the same time, the writer considers that it is not out of place to restate his leading contentions.

First: Acute diseases can be jugulated or aborted.

Second: A symptom always indicates a diseased physiological condition and it demands immediate relief so as to reestablish the normal state.

Third: It is clinical experience which enables us to recognize sthenia and asthenia. Instead of abandoning the vital forces to exhaustion by giving a drug which is either inactive or debilitating, it teaches the necessity of fortifying the system by excitomoters.

Fourth: "The whole of therapeutics may be contained in these three indications: sustain the vital forces, combat the fever, modify the nutrition." The agents which control these functions are found among the active principles.

Dr. Burggraave was strongly in favor of what he called, *bain du ventre*, or bath of the bowels. This consisted of magnesium sulphate in hot water, taken before breakfast. The doctor used this for many years, and his last publication was signed, the day before his death, at ninety-five years of age.

The writer has used this method for the past thirty-five years and now, in his eighty-seventh year, is in perfect physical condition, barring a fractured patella, due to a recent unavoidable accident.

As we have had a word to say for magnesium sulphate, it will not be out of place to mention sodium sulphate. Both of these salts, acting by osmosis, thoroughly cleanse the colon of any fecal matter.

Upon the subject of pure water, in "Hygiene and Sanitation," by Prof. Egbert, I found the following, on page 204: "According to Parkes and Rideal, fifteen grains of acid sodium sulphate to the pint of water (1 to 500) will destroy typhoid bacilli in five minutes."

It seems that here is a good suggestion for testing out this active principle clinically.

I have tried to show in this article that it is not necessary to wander from the beaten path in medical practice. Modern scientific investigation has brought *materia medica* to the point that it offers the doctor

a wide range of positive, tested and proven drugs for meeting and treating the ills to which flesh is heir.

In closing I will paraphrase an aphorism said to have been uttered by the Man of Nazareth, "Prove all things," "cleave to that which is" proven, "eschew that which is" not proven.

W. T. THACKERAY.

Fowlerton, Texas.

### INCOME TAX DEDUCTIONS

A physician is entitled to make deductions on his income tax report covering the following necessary expenses:

Cost of supplies in practice.

Expense of operation and repair of auto used in professional calls.

Dues to the county and state medical organizations.

Subscriptions to professional journals.

Office rent and expenses such as light, heat, water, telephone.

Salaries paid office assistants.

Amounts currently expended for books, furniture and professional instruments and equipment, the useful life of which is short.

On office furniture and fixtures which have a useful life of more than one year, a reasonable allowance may be deducted for depreciation.

W. Va. M. J.

### TREATMENT OF PNEUMONIA

The treatment for the various types of pneumonia will be about the same except that in lobular pneumonia, in children, we find more or less obstinate constipation, tenderness, and tympanites, which must be closely looked after, using mild laxatives, enemas, and hot applications. In any case of pneumonia, it is well to clean out the alimentary canal with some mild laxative at the start; after that, if there is a good movement every day, there will rarely be any call for any more purging, save in children who are too small to spit out the material coughed up, but swallow it. Go gently with cathartics as they are exhausting.

Put the patient in a room that can be kept at as even a temperature as possible, away from drafts, and keep the room at a temperature that is comfortable for the attendants. See that there is plenty of fresh but warm air, for we know that warmth is life, and cold is death for every-

thing in nature. The tendency during the last several years toward putting a pneumonia patient's bed in front of an open window, with no heat in the room, is, in my opinion, a contributing cause toward a high death rate.

As to food, almost anything light and easily digested is satisfactory; broths, soups, farinaceous foods and milk—either sweet or buttermilk, whichever is liked best by the patient. Orange juice or fresh pineapple juice is usually relished.

For external application, I use this combination: Libradol green, 3ii to 3i, according to the age and sex of the patient; Libradol mild, 3iii; Compound stillingia liniment, 3iv to 3vi; mix thoroughly, and rub on the surface over the seat of inflammation three or four times in the twenty-four hours, or spread it lightly on soft cloth and apply over seat of trouble, renewing twice or three times in the twenty-four hours.

Bathe sufficiently often for purposes of cleanliness only.

For medicine, the indications will, in nine cases out of ten, be: *Veratrum viride*, drops 10 to 30; *bryonia*, drops 5 to 15; *asclepias*, 3ss to 3iii; water, qs to 3iv; a teaspoonful of this mixture every hour. In some cases, especially in children, the sedative will be *aconite*, instead of *veratrum*. The indications are: small wiry pulse, *aconite*; full, strong, bounding pulse, *veratrum*. These fine distinctions make for success in treating any disease.

If the patient is restless and fidgety, add *gelsemium* to the mixture. If, on the other hand, the patient is drowsy, listless, and inclined to sleep too much, add a little *belladonna* instead of the *gelsemium*. If the patient is drowning in his own secretions, add 20 drops of *pulsatilla* to the mixture, and mark the marvelous improvement in a few hours.

Some cases will have a broad, dirty, pallid tongue; to such give sodium sulphite, from one to ten grains either in capsule or solution, every two to four hours, and see the condition change to normal very quickly.

If, on the other hand, we find the tongue red or inclined to be reddish, give some of the mineral acids, well diluted, or some of the vegetable acids, at about the same intervals.

Here is a general rule: With pallid mucous membranes, never give an acid; and with red mucous membranes, never give an

alkali, it matters not what the disease may be.

We need no heart stimulants so long as the fever lasts, and most cases will not need them even after the fever has gone, but, if needed, I nearly always give *cactus grandiflorus*; never *strychnine*; and rarely *digitalis*.

I have never used the serums because I don't need them and so long as this line of treatment, with the little variations that will be necessary, is all that can be desired, why introduce something that is so uncertain as the action of serum seems to be?

The cardinal point in treating pneumonia is to get the skin to acting and keep it acting by the means mentioned above, with what variations may be necessary as conditions present themselves. With this line of treatment and good care, the death rate will not be more than five percent.

T. A. DEAN,

Casper, Wyo.

[Dr. Dean's suggestions seem useful and practical. As to the internal medication, however, why not give *Veratrine hydrochloride*, gr. 1/120 to 1/60; *bryonin*, gr. 1/60 to 1/30; as well as *Gelseminine* or *Gelsemoid*; *Atropine*; and, whenever possible, the *active principles*, if such have been isolated. It has long seemed to us that when we are able to administer the part of any drug which *does the work*, without giving any of the trash, our therapy is more accurate and scientific, and our remedies far more portable and hence ready for use when the need arises.—Ed.]

## PARATHYROID IN FRACTURES

On page 118 of your February issue is a short paragraph headed "Parathyroid in Fractures".

It might possibly interest you to know that a short time ago I treated a fractured femur which, after six weeks in a Hodgen's splint, showed very little callus and quite distinct crepitus.

Without any other change being made in the treatment, he was given parathyroid during the next three weeks and was then able to walk, with the help of a light cast and two sticks.

J. B. MACKAY.

Provost, Alberta, Canada.

This is a prompt response (the letter is dated Feb. 11) and a very interesting case.

We publish, every month, many interesting notes regarding new drugs and other therapeutic procedures. Many of our readers have, no doubt, had personal experience with some of these new methods, and if they would sit down, *at once*, and write us about it they would be making valuable additions to the science of clinical medicine and conferring benefit upon themselves and all their brother physicians, as well as making our Journal more interesting and valuable to all its readers.

Let us have more of these brief and practical notes.—ED.]

### EATING FOR HAPPINESS

"Though we travel the world over to find the beautiful, we must carry it with us, or we find it not."—*Emerson*.

High resolve is a wonderful thing as an item in the accomplishment of purpose, and such an attitude, upon the part of an individual who is striving after the perfect, should certainly receive the support and commendation of any thinking man. But high resolve, in order that it may be a factor in accomplishment, must have the aid and assistance of material things, whether these material things are classified under the name of muscle, ability, fuel, force, or food.

To my mind, one of the deepest insults that can be paid a Supreme Being, in this day and age of education and enlightenment, is unthinking and noncooperative supplication; in other words, it is grossly illogical, to my mind, for any individual to so absolutely and ignorantly ignore the Law as to pray to God for physical salvation, and carry to the praying place an unwashed body, a befuddled brain and a dirty digestive tract.

If there is a Law (and there is) we cannot expect the Maker of this very Law which He has promulgated in a spirit of fairness towards everyone of us, to put the Law aside, and for the moment ignore it, for the especial benefit of an individual supplicant.

Mark Twain tells the story of his first trans-Atlantic voyage in his "Innocents Abroad". Each morning, the entire ship's company gathered together and prayed for favoring east-blowing winds. On the ship's arrival in Liverpool, it was discovered that, at that particular season, thirty-seven vessels were crossing the Atlantic in a westerly course for every one traveling

towards the east. It is not hard to get the point of this story.

To come back again to the matter of asking for favors, without being in any way fit or ready to receive them, I wish to call to your attention the fact that the germination, birth, adolescence, maturity and death of everything on earth—from the atom to the blade of grass; to the wild animal; to man—is dependent upon the law, and in order that any single thing on earth shall pass through a perfect life cycle, it is demanded that the law which governs all growth and development must be obeyed to the letter. This and this alone assures us of a perfect and fully rounded product. As to plant life, we know that the nitrates and phosphates and the potassium salts, as well as carbon and hydrogen, oxygen and nitrogen, must be present at the proper times and in proper relations and proportions in order that a blue-ribbon-winning soil product may eventually result; and it is obviously as essential for bringing the human body to a glorious maturity, that analogous favorable environmental conditions exist, in order that a perfect individual may result.

All the thought and determination and prayer in the world on the part of a grain of wheat could not result in its perfect growth and ultimate perfect maturity, provided, for instance, that it was determined to try to mature without nitrogen and water. On exactly the same lines, it takes no argument to show that a human being can not grow perfectly in mind and body until such time as he is ready to acquiesce to the laws which allow of such perfect growth and development.

Herbert Spencer says, "All that I have seen teaches me to trust the Creator for that which I have not seen."

Personally, I am thoroughly convinced that something ineffably great—some power absolutely beyond finite comprehension, but which, because of its greatness, stays fully within the confines of the Great Law—must necessarily be responsible in governing and allowing, because of this government, folks who know so little to accomplish so much, in spite of their self-accumulated mental and physical handicaps.

The natural, law-controlled course of events is the item which compels attention and investigation, and renders proof possible. Things are, because they cannot help but be, as based upon environment and adaptability.



And so I return to this title of this article, *Eating for Happiness*, and I wish to state as my absolute belief that this is the only way in which any human being anywhere or under any circumstances, can attain to absolute happiness. By this I do not mean that proper eating will put a man into such a miraculous physical state that he can disobey a law and not suffer pain and unhappiness in consequence. What I do mean is, that a diet consisting largely of fruits and vegetables, with little or no meat or refined grain products; and in quantity very much less than most people consider essential, will enable one to be freed from many chronic ills which result from auto-intoxication.

If you eat for happiness you will surely get the happiness you desire and deserve, and such eating will, in a very short time, resolve itself into a pleasure and not in any way a penance.

You can't be happy with an overloaded colon or an inflamed stomach and intestine, and there is no way in which you can be forced into real unhappiness, provided you maintain a chemically clean digestive tract.

I am not saying that a normal and clean and perfect digestive system will keep your bank from failing, or keep you from hearing unkind words that hurt, or keep you from slipping on an icy sidewalk, or assuring you that your home won't catch fire; but I do say that proper living—living as far removed from gluttony as possible—will deliver to you a body and brain which will be comparatively immune to the every-day environmental ills that fall to the lot of every one of us, and also provide an elasticity of cell structure in both muscular and nervous system which will enable you to ignore hosts of irritating items which the imperfectly-fed individual frets and worries and loses sleep over; and you will possess the ability, because of this tissue elasticity, to forgive many aggravating things, animate and inanimate.

In closing I wish to state that, to my mind, it is plain that when the time eventually comes that every one on earth is so conducting himself, along dietetic lines, that, because of a perfectly coordinating body chemistry, handkerchiefs and tooth brushes are no longer used, because there is no further call for them; when such a time comes, (as it must in a natural scheme of things, which is yearly tending towards perfection), then, and not till then, will great mental strides be made, because these

are only possible to a brain nurtured and stimulated to thought because of clean blood brought to clean cells and furnished by a perfectly clean body.

When such a time comes, every one will be happy, not because he wills to be, and not because he makes an effort to be, but because he cannot help himself. His *happiness center* will function as perfectly as the rest of his economy.

W. V. GAGE,

Denver, Colorado.

### HEALTH AND BEAUTY

Don't you believe that beauty is only skin deep!

Beauty has its foundations in a sound body and in good health habits.

We have no quarrel with the judicious use of cosmetics. If a dash of rouge supplements nature in making woman more pleasing to the world, by all means let her use the little rouge. The danger from painter's colic has been greatly exaggerated.

But mark this well! When cosmetics are used to supplant the natural beauty of health; when daily exercise consists mainly of calisthenics with a lip stick in front of a vanity, then cosmetics become a menace to beauty instead of an aid.

The things that create permanent beauty are the things that promote health. They are exercise, fresh air, sane diet and good mental hygiene.—DR. HERMAN BUNDESEN, in *Chicago's Health*.

### MAN HIS OWN ENEMY

#### (The Necessity of a Periodical Health Survey)

Man himself is cheating science of her victory in the conservation of human life.

Medical science has conquered to a large degree the scourges which decimated men in bygone ages. Man, however, holds the gifts of science lightly. Having been saved from the perils of childhood, having escaped smallpox, typhus, cholera, typhoid fever and other diseases which killed people by the thousands thirty or forty years ago, he heedlessly abuses himself and, through wrong eating habits, lack of proper outdoor activity and a life that demands too severe a strain upon his nervous system, undermines his health and he manages often to die younger than did his grandfather.

The failure is that of the individual—not of medical science or physicians. Today man has everything but himself working in his favor for health and longevity.

Heart and arterial troubles are making themselves felt more than they did a generation ago. The same fact holds true of diseases of the digestive system and the kidneys. Rheumatism, neuritis, vertigo and other ailments are signs of a disregard of the organs upon which the functions of the body are directly dependent. They withstand the abuses heaped upon them without breaking down until a point is reached when structure is undermined and then it is too late to do much in the way of repair.

For example, diabetes may go on for years without troublesome symptoms. During this time control by simple treatment is easy if its presence be known. Certain kidney diseases are very insidious in their first stages and progress almost imperceptibly until the disease approaches the terminal stages. Simple measures would often stay their progress if applied in time.

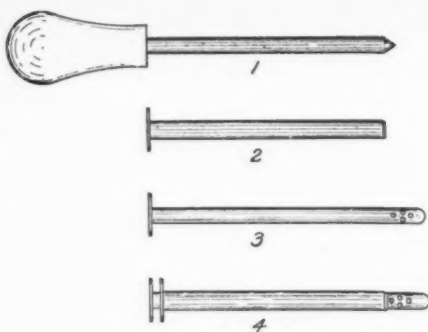
Similarly, tendencies to apoplexy, arterial troubles and the nervous diseases, if discovered in time, can frequently be averted, or held in check for years. It is for this reason that all enlightened physicians are urging the periodical health review habit.

Every normal, healthy-minded person wants to live as long as he can and to enjoy his full span of life without the burdens of chronic disease. But to do so he must think twenty years ahead and when he reaches thirty-five or forty have some competent physician regularly check up on his health condition. He cannot subject his body and mind to the strain of the strenuous life, eat what and when he pleases, and expect to be hale and hearty and to keep going to 70. If the average adult would pause every year long enough to take a health inventory, not so many would drop in their tracks at fifty or thereabouts.

WM. G. EXTON,  
Longevity Service,  
Prudential Insurance Co.,  
Newark, N. J.

#### A NON-STOPPING CANNULA AND A NEW TROCAR

I am enclosing herewith a drawing of an improved trocar, and a cannula within a cannula, for drawing off ascitic fluid. This cannula eliminates the obvious difficulty of



the bowel or omentum dropping in front of the cannula and arresting the flow of fluid, as it so often happens with the old type of trocar and cannula.

Briefly: The extra cannula (3) is five inches long, with a flange on the proximal end and fenestra at the distal end, with an extension about three-quarters of an inch beyond the perforations.

When the trocar is introduced and the regular cannula (2) is in position, the fluid begins to flow when, of a sudden, the gut or omentum falls in front of the opening and the flow ceases. The long, fenestrated cannula is then introduced through the other (4), pushing the gut or omentum away from the mouth of the cannula and allowing the residual fluid to flow through the perforations as shown.

The trocar itself (1) is no different from other trocars in use except that instead of the usual cutting edges it has a sharp, tapering, round point, like a shoemaker's awl. This gives it a slight advantage over the cutting edge type in that there is no danger of injuring small blood vessels in passing through the abdominal wall; and penetration is just as easily accomplished.

I have been using this instrument for some time and find it satisfactory in every way.

A. W. DUMAS.

Natchez, Miss.

#### SUGGESTIONS FOR PREVENTING CANCER

To live in health the human body requires five things: air, water, food, sleep and exercise, in proper proportions and in the purest and most natural forms.

The United States is losing, by death from cancer, about 90,000 persons every year, while this disease is almost unknown among

uncivilized races who eat raw foods and live a natural life. On this basis it is reasonable to suppose that the nearer to nature a man can live the less the probability that he will develop cancer.

The average person, weighing 150 pounds, excretes, through his kidneys, three pints of water every 24 hours; through his skin, two pints; and through his lungs, one pint. This must be replaced by drinking six pints of fluid every 24 hours, or 2 glasses for every 25 pounds of body weight.

Fresh, raw milk, vegetables, fruits and water contain all the elements necessary to nutrition and furnish sufficient bulk for the bowel to contract upon, assuring three stools every 24 hours. Such excretory activity tends to prevent and cure many diseases, among which cancer may well be numbered.

Fresh air is the great restorer, and one reason for the prevalence of tuberculosis and pneumonia is that most of us use only 25 to 50 percent of our lung capacity in ordinary breathing.

The only rest our hearts get is when the beats are slowed during sleep, and the less work this organ has to do after the evening meal the better it will serve us the next day.

The nearer to the earth a man will live and work the better are his chances for a healthy life.

In order to render efficient service, automobiles and other machines must be inspected every six months, at least. The human machine should have a thorough overhauling, by a competent physician, every six months and all abnormalities should be corrected.

I believe that the best way to prevent cancer is to drink plenty of water; keep the body clean, inside, by thorough elimination, and, outside, by frequent bathing; and eat only simple fresh foods in reasonable quantities.

ALDUS A. HOOPMAN,

Seattle, Wash.

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#### A DOCTOR SUCCEEDS IN REAL ESTATE

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The fact that I have for many years been known to my friends as "Doc" Dammers is one of those little things which has always seemed to me to show the tremendous popularity of the medical profession. Although I am a doctor, it is not in the capacity of a medical man that I have made most of my

friends all over America; yet, anyone who has a chance to use the word "Doctor" does so if he can. The result is that everybody calls me "Doc"; and I'm proud of it! It's one of the best titles there is, after all.

It is a long time since I have done any doctoring, though; not since the old days in California, long before the great rise in property values began there. I was in California when Los Angeles began to be talked about as a promising little town of a few thousand inhabitants; and when I began to look into the future then, the things I saw made me decide to drop everything else but real-estate. In these days, there is more real romance in big real-estate developments than there is in almost any other line of business in the world. I've tried most of them, so I know!

I left California after a time, having done pretty well there, and came down to Florida, nearly twenty-two years ago, with the idea of resting from my labors. But, if I had only known it, they hadn't even begun then! I went to Palm Beach first, and did business there for a while; then I went on south to Miami, the place which has been my home ever since. Since those days, Miami has become the Eighth Wonder of the World, and I am very proud to think that I had some little share in shaping its destinies. Miami Beach and Coral Gables, by far the two most widely-known developments in Greater Miami, were both being sold by me long before even Miamians themselves realized that they had any prospects at all.

When I was first selling lots on Miami Beach, that wonderful island that has since become one of the magic watering-places of the world, there was no approach except by boat and nothing much when you arrived there except mud-flats and alligators. It wasn't much to see then, I can tell you! But I had a sort of instinct that there were going to be marvelous developments there; and even way back in 1912, when I sold the first 200 acres that was ever bought there, I know that the buyer was going to make a very big thing of it indeed. What he has done now is past history.

I still keep hanging in my office in Flagler Street, Miami, a framed copy of that faded old notice of the first beach auction, giving notice of "Free Boat Transportation" to the site of the sale. A good many of my customers wander up to look at that notice; and it certainly is an interesting relic. Today, there are some of the finest hotels

in the world on Miami Beach, and some of the most beautiful private residences; there are office buildings, gardens, street-car lines. If that isn't romance, the Romance of the New America, I should like to know what is!

There is a little story I sometimes tell in connection with Coral Gables, that wonderful development of George E. Merrick, which has undoubtedly attracted more attention all over the world than has any other similar enterprise in history. Well, I was the first man to sell Coral Gables when it was put on the market four years ago, and I prophesied then that within only a few years the City of Miami would be expanding towards the west until ultimately Coral Gables would be right at its center.

One morning, just after we were beginning our sales, I was called on the telephone by a very old friend of mine. But he wasn't a friend that morning—he was very stern.

"Look here, Dammers?" he said. "You mustn't go about telling people this sort of thing. You know as well as I do that the center of Miami isn't moving that way at all!"

Well, we didn't quarrel about it—I had my faith and he had his. But it was one of the pleasantest moments in my life when, a few weeks ago, this same man met me and said: "Dammers, you were right and I was wrong. I apologize. Though for all that, I don't know how in—you saw it coming."

I am Mayor of Coral Gables now, and I think I am right in saying that I no longer have the reputation of being a rather wild prophet. All of the things that I have said about Miami have come true—even to the statement that the city would have a population of 100,000 by 1925, for which I was nearly put in a lunatic asylum. People are beginning to realize more and more that there are possibilities in Miami and in all Florida that were never dreamed of a few years ago. Those of us who saw them first were naturally the ones to profit by them most, and I am very glad indeed to think that in those days I succeeded in persuading many people, who didn't really believe what I said even though they put their money in my developments, to lay the foundations of what have afterwards become big fortunes. It's a comfortable feeling for a man to know that he has made money for other people besides himself. Of course, I'm not pretending that I was the only one who saw what was coming in Florida—I

wasn't, not by a long way. But I do claim that Miami Beach and Coral Gables especially, both of which were for years handled by my organization, have made more money for their investors than have any other developments in Florida.

I like Florida, and I believe that it is the most wonderful country in the whole world. I wouldn't be living here if I didn't think so. Though I live most of the year in Florida, I don't want to lose touch with the rest of America. And, as a matter of fact, all of America seems to be coming to Florida these days, so that I have seen more of my old friends here during the past year than I have ever seen in any one place before.

I hope they will still keep on coming to see me. No matter how busy I may be, I always can somehow find time for a talk over the old days and the old people.

EDWARD E. DAMMERS, Mayor,  
Coral Gables, Florida.

#### HYPERTROPHIC PYLORIC STENOSIS\*

Pyloric stenosis is, if not promptly and effectively treated, one of the most fatal conditions encountered in young infants and the family doctor should always be on the watch for it.

##### Symptoms

- 1.—Vomiting begins within six weeks after birth.
- 2.—A visible peristaltic wave can be seen, moving from left to right—more marked after feeding—and followed by projectile vomiting.
- 3.—There is a rapid loss of weight.
- 4.—Bowel movements are very scant or absent, because no (or very little) food is passing the pylorus.
- 5.—There is a palpable tumor in the epigastric region, which may be demonstrated in all cases, if one has patience. It may require an hour to find it.
- 6.—The condition is much more common in males than in females.
- 7.—There is never bile in the vomitus.

If seen early, medical treatment will sometimes cure (Sauer). Give thick gruels or other simple, thick food in small quantities every 3 hours, and with each feeding give one drop of a solution of 1 grain of atropine in 1 ounce of water (1/500 grain to a dose).

\*Abstract of a discussion by Drs. John Graham and L. W. Sauer before the North Shore Branch of the Chicago Med. Soc., Oct. 6, 1925.

If this treatment fails—and do not wait too long if improvement is not at once manifest—or if the case has been going on for some time before you see it, call a surgeon who has had experience in this type of cases.

Rammstedt's operation produces best results in these cases. The general mortality for this operation is now less than 10 percent. In breast-fed infants, where the condition has existed for less than four weeks, there is almost no mortality. The death rate in bottle-fed infants is three times as high as in those who are breast-fed, and the longer the duration of the disease, the less brilliant the results.

The operation should be done under *local* anesthesia, the best anesthetic being:

Fresh procaine solution*, 1-percent	3 vi
Chlorethone solution, 2-percent.....	3 ii
Magnesium Sulphate sol., 2-percent..	3 ii
Adrenalin ( <i>fresh</i> ) .....	Gtt iv

If this solution is not available the procaine may be used alone.

The child should be carefully wrapped on the table and the temperature of the operating room should be 85° F., so as to avoid loss of body heat.

If the patient is restless, he may be given a bottle while on the table; and should be given one as soon as he is returned to bed.

Breast feeding should begin as soon as possible, and this may be done without lifting the baby or causing him any effort—which must be avoided—if the mother will *lean over the bed* and place the nipple in the child's mouth as he lies on his back.

G. B. L.

### COFFEE-DRINKING BY CHILDREN

Coffee-drinking by children has long been regarded with disapproval by pediatricians. There are a number of objections to the practice, among which its harm to the nervous system is important. It is entirely conceivable that the use of caffeine-containing beverages by the child will lead to the production of serious nervous defects later in life.

In their recent book, "Safeguarding Children's Nerves" (1924), Doctors Walsh and Foote clearly indicate that there is an increasing nervous instability of American people as demonstrated by the failure of many of our troops to withstand the stress and strain of active service. These writers

believe that the numerous cases of shell-shock among the American soldiers in the World War were nothing more than cases of hysteria. It is possible that early use of coffee has had a contributing part in causing the lack of nervous balance that is exhibited by so many adults in this country.

The drinking of coffee in the United States is steadily increasing, and the average annual consumption now amounts to thirteen pounds or more per capita. No small portion of this coffee is used by children, as shown by a study of the diet of a large number of children of preschool age at Gary, Indiana. This survey was made by the Children's Bureau of the United States Department of Labor. The report mentions that "two-thirds of the entire group were found to drink coffee habitually, and forty percent to have it more than once a day. Not only so, but, in certain of the groups of foreign-born parentage, coffee was drunk by more than ninety percent of the children, and three-fourths of the Polish group had it two or more times a day."

In 1912, C. K. Taylor, a psychologist, made a study of coffee-drinking by school children. He found that, out of a group of 464 children, over seventy percent of them were coffee-drinkers. Moreover, and more important still, he discovered that those children who drank the most coffee received the lowest grades. There is no doubt but that coffee-drinking by children is generally deleterious to the nervous system of the child. But the greatest harm done to children by this drink is its replacing milk in the diet. The Gary report, referred to above, states that coffee-drinking by children "appears to have been inversely proportional to the use of milk. Not only do the schedules show about the same percentage of children drinking coffee as those lacking milk, but a comparison of coffee-drinking by milk groups shows the use of coffee to increase markedly as the amount of milk decreases." Commenting upon the disastrous effect of replacing milk by coffee, the report states further: "To leave out milk and substitute coffee plays havoc with any diet, whatever may be its redeeming features."

It is a well-known fact that children easily acquire a taste for coffee and are less willing to drink milk after being permitted to use coffee. Miss Lucy H. Gillett, Superintendent of the Nutrition Bureau of the New York Association for Improving the

\*This solution should be made with water which has been sterilized on 3 successive days.



Poor, says, in this connection, that "children should never be given tea or coffee, not even to flavor milk. They will more often like milk if they are not first taught the combination of milk and coffee."

There are two important reasons why coffee should not be given to children. First, it has the harmful effect of crowding milk out of the dietary of the child. Second, it is an undesirable and unneeded stimulant.

In view of the fact that a large number of American children, especially in the industrial classes, are coffee-drinkers, the matter is worthy of serious consideration.

From the *Mellon Institute of Industrial Research*, University of Pittsburgh, Pa.

#### A METHOD OF TREATING DIPHTHERIA CARRIERS\*

In October, 1924, the city of Winchester, Illinois, was threatened with an epidemic of diphtheria and we decided to make a survey of the schools to see if we could locate the source of the infection. Smears were taken from the throats of all the pupils and the teachers of both grade and high schools and submitted to the State Laboratory at Springfield, Illinois.

The smears were promptly examined—762 in all—and eighteen pupils from both schools were found to be "carriers." It is to be noted that these were all pupils; none of the teachers were found to carry any infection of the nasopharynx.

The carriers were promptly isolated, but the question naturally arose as how these cases were to be handled. They carried their own immunity, or they would have shown symptoms of infection, which they did not do. Antitoxin would be of no use in such cases. The indication was to clean out the nasopharynx, rather than to aid nature in building up her defenses.

I had never seen the method I decided to use reported in the literature, but it suggested itself to me because of the use of ether by the Army surgeons in dealing with infected cavities during the World War.

The nasopharynx was cleansed thoroughly with a 2-percent solution of chlorazene. (This was always made fresh each day and used as a spray.) Then ether was given by inhalation for several minutes, always stopping short of anesthesia.

The rooms that were isolated were subjected to thorough ventilation and the dis-

charges were promptly burned. The patients were isolated in their own homes under more or less rigid rules of hygiene, which their appearance indicated they followed.

The results of the treatment were as follows: Thirteen cases gave two negative cultures after five treatments. Three cases gave two negative cultures after six treatments. Two cases gave two negative cultures after six treatments.

The results were so satisfactory that no other treatment was used; neither were the ether inhalations given without first thoroughly cleansing the nose and throat.

Possibly this treatment of carriers was not new, but it was new to me.

The things which recommended this treatment are: ease of application, simplicity, cheapness, conclusive results, and the ease of procuring the drugs. Getting an antiseptic into the remote cavities of the nose is a difficult thing to do; however, the bodily heat thoroughly vaporizes the ether which must greatly aid its penetrability.

H. H. FLETCHER,

Dept. of Surgery, St. Louis Baptist Hospital. Winchester, Ill.

#### THE DOSE OF LOBELINE

In the December, 1925, number of *CLINICAL MEDICINE*, on page 879, we published an interesting abstract on the postoperative use of lobeline for the prevention of bronchopneumonia. Just before going to press with the January number, one of our associates, whose knowledge of therapeutics is exceptionally extensive and accurate, called attention to the size of the dose recommended.

Both of us have been in the habit of using much smaller doses than those given by Dr. Frommer and, for that reason, we felt that the amount stated in his article might be excessive; so on page 53, of the January, 1926 number, we published a note to this effect.

Exception has been taken to this latter note, which has led to a careful study of the latest authorities on the subject, as a result of which we ask Dr. Frommer's pardon. He was, according to the textbooks, within the limit of safety with his dose of 1/6 grain.

If lobeline sulphate was used—the doctor does not state which form was employed—the dose is stated as being from 1/4 to 1 grain. If he used alpha-lobeline, which seems probable, the dose recommended for

\*Reprinted, by permission, from the *Bul. St. Louis Bapt. Hosp.* for October, 1925.

that substance is 1/20 to 3/20 grain, so that Dr. Frommer's dose is only slightly in excess of the maximum recommended.

We still feel that, for the average physician, the employment of maximal doses of so powerful a drug as lobeline is not wholly free from danger, and that it is safer to begin with smaller doses and repeat them to effect rather than to touch the limits of safety in the first instance; but our desire to do justice to everyone prompts us to publish this statement.—ED.

### THE PUBLIC'S DEBT TO THE PHYSICIAN

It has been computed by conservative physicians that 40 percent of their service is gratuitous, either through voluntary service or through clients failing to pay the doctor's bill.

A cursory survey of the gratuitous service given by physicians through medical institutions in the Greater City of New York, based upon the number of "free hospital days" aggregates \$16,000,000 annually.

This figure by no means indicates the total bill that the city-controlled and private hospitals would have to pay if the doctor, like other professional men, demanded and received payment for each and every service performed.

It is based upon returns from but 107 of the 140 odd medical and surgical serving institutions giving some portion of charity service.

Evaluating the physician's service nationally upon the hypothesis that, outside New York City, a pro rata service, in quantity, is given equal to only 50 percent, and assuming that each "hospital day" service was paid for at the rate of \$3.00 per day, the nation's bill due the doctor would be more than \$135,000,000 annually.

A survey made within the City of New York (by no means complete because many of the hospitals had not their figures at hand for this quick computation) shows that a total of 5,020,502 "free hospital days" service were given to free charity patients in the city's hospitals in a year.

Going a step further, it is no exaggeration to say that each patient is visited at least three times in each "hospital day" by a physician who receives no compensation whatsoever. If we compute each visit of the physician as being worth a dollar, we find that the bill would be \$15,061,506 per annum. This includes the services of the

consulting and outside attending physicians and surgeons, together with the services of the internes, but it is all medical or surgical service.

In taking three dollars as the equivalent of service of the consulting, attending and intern physicians, we feel we are placing the compensation at a price so far below normal for the compensation for a similar service outside the institutions as to prevent criticism or cavil of any kind, for, when it is considered that these include the best medical and surgical brains in the country, the most expert men in the profession, who, in some instances, are known to charge fees as high as \$5,000 for an operation, who regularly charge \$25 or more for a consultation, as well as those who charge no more than \$3 per visit to outside patients, we feel that we have been almost unfair in the computation of the doctor's bill; but we will let it stand at that figure to show the prodigious sum that annually would be due the doctor if, as I have stated before, he demanded and secured even this small measure of pay for his services in public institutions.

### The National Bill

As New York City represents about 1/18 of the total population of the United States, the national bill would, therefore, be eighteen times that of the City of New York, but we will not use that figure, because it might be argued by some that the measure of service given throughout the rest of the country is not in the same proportion, either in quantity or quality.

On the other hand, there are those who may claim that the service by physicians outside Greater New York, through similar institutions, is even greater proportionately, both as to quantity and value.

To be very conservative we will set down as our premise that the balance of the country gives pro rata a service but 50 percent of that given by the City of New York. This abnormally low computation shows that the physicians' national bill would total \$135,553,554.

If we place the total number of registered physicians in the United States at 165,000, and divide this into the figures above attained, we find that every physician in the United States should be credited with \$821 gratuitous service every year.

It must be remembered that this sum does not in any sense measure the free service of which no accounting ever has been made or ever can be made—of the charity or

free service that the physicians give to the poor whom they meet in their daily practice. Just what this bill would amount to, God only knows, because the physician never keeps account of it, and if you happen to mention it to him he will laugh it off, saying, "Oh, that's for the good of the service—for the good of mankind."

But, there is another element that enters into this question of service, for which the physician never is paid, and this is the most baneful element, the unpaid bills of those who are well able financially to meet their obligations to their physician. Every family doctor has a number of these every year upon his books, and if the facts and figures were recorded, of the money lost to the physicians in this way, it would stagger one and give to each a twinge of conscience.

When one considers that the measure of the physician's service is intimate, personal, and means relieving the individual of pain, suffering, the saving of a limb, aye, the saving of a life, perhaps, this negligence takes on an aspect that is indescribable.

With this situation well in mind, can there be any question as to why so many physicians eke out meager existences, and that many—the majority—die without estate, and that many become public charges because of financial distress?

And with the costs of living rising like the tides, is it any wonder that so many of them are engulfed and have to enter almshouses, or that those capable of it have to seek employment in other lines in order to maintain themselves decently?

J. F. McGRATH,

New York City.

#### FOOD POISONING

There are two varieties of food poisoning: In one we swallow, in thoroughly cooked hot meat and fish, only the poisons produced by the microbes, the microbes themselves being killed by the heat; in the other we swallow not only the poisons but the microbes also. This usually occurs when we eat cold meats and fish which have been kept for some time in the larder.

The former is ptomaine poisoning, and it comes on very soon after the food has

been eaten. The latter is bacterial infection of the same type as typhoid fever or any other infectious disease. It lasts longer and is more deadly.

How can we protect ourselves? The matter is largely in the hands of the butchers, fishmongers and restaurant proprietors, but much can be done in the home.

First, we should understand what foods are most dangerous. Statistics of epidemics of food poisoning prove that these are cold veal, cold pork, cold meat pies, goose, duck, tinned corned beef (eaten sometime after it has been opened), mackerel, and tinned salmon. Beef eaten cold some hours after cooking is also answerable for food poisoning. Mutton has so far been innocent.

Measures should be taken to preserve meats, fish, fowl, and even milk from contamination. The larder should be kept scrupulously clean and protected from the entrance of dust and flies. (Very often the dustbin is not far away from the larder window.)

Every article of food should be kept in a covered receptacle. Cats and dogs should be excluded from the kitchen or wherever food is kept. We should avoid eating cold meats and fish foods, at any rate if they have been kept for more than 24 hours after cooking. Reheated meat has a reputation for being indigestible, but it is safer than cold meat.

Another point to attend to is to cook meat in small pieces and very thoroughly. The most deadly microbe of food poisoning, the Gaertner bacillus, is most resistant to heat, and may not be killed by boiling unless the boiling is prolonged.

The order of safety, from the greatest to the least, is fried meat, roast meats, boiled meats, and cold meats.

B. SHERWOOD-DUNN,

Nice, France.

[In this country, hash, which has been prepared the night before it was to be used, has acquired an unsavory reputation as a ptomaine factory.

Food poisoning is comparatively rare, in the United States, but the above suggestions are interesting.—ED.]



# The Leisure Hour

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Conducted by GEORGE H. CANDLER, M. D.

## Your "Old-Fashioned Dad"

WHEN you were just a little tad, who else, to you, compared with Dad!

What other man could be so strong, so surely right, so seldom wrong!  
He knew so well your inmost thought that what you did was what he taught

And not one trait in you that's *bad* came down from that "Old-Fashioned Dad."

He taught you how to pitch a ball, to box, to give—and take—a fall;  
He showed you how to hold a gun and how to cast a fly, my son;  
He made you love the whole out-doors and posted you on Nature's laws—

Was Guide, Philosopher and Friend, one Pal on whom you could depend.

Then came a day when you felt "grown", resented being taught or shown:

You set yourself a faster pace, left Dad behind you in the race

And, as each year brought something new, began, at last, your Dad to view

As just a sort of "also ran"—queer and old-fashioned—the "OLD MAN"!

He felt it keenly, but he knew that Time would bring such change to you,  
And, loyal, hoped your son might grow more like the boy he used to know.

Alone he faced the darkening way—came safe to Camp at close of day—

A serial story? Yes, my lad: the author? An "Old-Fashioned Dad".

G. H. C.



## And The End Is Not Yet

GENTLEMEN who love to spend their days delving into things of the past, recently came across some fragments of a slab bearing characters that proved the scribe to have existed several centuries before the birth of Christ. The slab was old, *very* old, and the man who engraved his thoughts thereon was evidently old, too. Translating freely, he said; "The end of things draws near: our young people are so dissolute that they will not have the vitality to project themselves into the future. The gods will destroy us and there will be nothing left." That particular people were not exactly "destroyed by the gods", but they did peter out to comparative nothingness just as several other peoples have changed from torrents to tinkling rivulets of humanity.

When those words were written on the slab, the World was OLD. When some remote ancestor of that scribe wagged his sloping chin and hazily thought—because of some draught or flood probably—that the "end of things" was at hand, the world was OLD. It is just a little bit older now, and again "the-end-is-at-hand!" person is busy. To him the fact that men fly (more or less); that a sound uttered on the Atlantic coast may be heard clearly on the Pacific without any visible contact between those points; together, of course, with the utter wickedness of the generation, means nothing more or less than the beginning of the end! He doesn't know very much about the *beginning* (usually he takes it as a seven-day wonder), is not very well posted about things which really have happened and has a distinctly hazy idea as to where he came from or is going, but, he *is* quite sure that everything and everybody except he and his'n are tee-totally wrong and will cause an avenging Deity to smite and spare not. He is sure that we are (most of us) "going down", while he and a few peculiar ones are "going up". He is—he and others like him—"going up" now! Moreover, they'll never, never come down to a commonsense base again. They *love* "excursions and alarums" and their ordinary lives are so darned drab that a cataclysm would be a positive relief, particularly as *they* are destined to be spared and become the "shining ones" they are not now, at this present! Such men see approaching Doom in anything—and everything.

An otherwise intelligent man told me, the other day, that Mussolini was without any question the Anti-Christ spoken of in the Revelations, that the League of Nations was "a child of the terrible Vatican" and that Armageddon would soon be fought. Then—with the exception of a few (non-thinking) Saints—the peoples would be destroyed and the few would enjoy the millenium. You see, he didn't want to end *everything* entirely—not yet. He's *here* and very, very "select."

I asked him if the seventh horn was, in his opinion, not likely to be a Klaxon and he called me an unregenerate ignoramus—or something petrifying like that. I ventured to ask him if he considered Revelations to be inspired—and an exact translation—and he emphatically assured me that ALL sacred writ was inspired. Further inquiry revealed, however, that he was not sure whether it was John the Baptist, or one of the four Evangelists who wrote this wonderful allegory—but ultimately he felt reasonably certain that it was St. Paul, on the Island of Patmos! This may seem preposterous but it shows truthfully the fuzzy state of mind possessed by one man who moulds his opinion of the past, present and future upon Revelations.

There are a lot of him running about today and also a very great number of people, who do not profess to be religious at all, but "feel it in their bones" that the end of the world must come at about the end of this century. Two thousand years to them is a very long time. They are not quite intelligent enough to realize that, in the scheme of things, "a thousand years is but as yesterday"—or a "watch in the night". Not being able to reason that far, it is quite impossible for them to imagine anything else but a total destruction of everything by a vengeful God. They talk Love with one breath and then make their Father a destroying—coldly destructive—Judge. They grant Him ALL Wise—ALL Powerful and then—poor puny puppets that they really are—they paint Him as the ruthless obliterator of all that He created. Of course everyone knows that this sort of reasoning is common; we—most of us at least—know also that this world would be a much better place to live in if the feeble-minded, but talkative, would-be prophets would go to hoeing corn or canning tomatoes.



The evils that have descended upon this earth have never been universal. Invariably you will find that the disasters which have overtaken a people were of very human origin. If a nation becomes profligate, dissolute and generally unfit, it is but natural that a stronger, cleaner race will come in and inhabit the land they cumbered. If any one of us becomes *too* self indulgent and supine he most certainly will be destroyed—not by any Divine act but by people like himself or by entirely natural processes. As with the individual so with a People. Let them follow certain very well understood and fundamental laws and they will flourish and *persist*. Let them fail too markedly and inevitably they will *go down*.

There is much, very much, yet to happen on this old earth. There are more worlds than this one and it is rational to suppose that, out of all the universe, this planet is not receiving the particular attention of the Omnipotent. That any one ant on the heap should consider himself able to outline the Creator's plan, is, to say the least, presumptuous—and preposterous. I think it was old Doctor Watts who wrote:

"God moves in a mysterious way  
His wonders to perform;  
He plants his footsteps on the sea,  
And rides upon the storm."

That is elemental enough, but surely the Divinity *is* elemental. Why listen to the patter of those who would make Him a sort of superglorified man, moved, alas, by the very unfortunate passions which sway us? Wars there will be, Nations will come and go but the end of the world cometh to each man usually when he least expects it—like a thief in the night. Amen!

Reading this copy over, I am appalled to find I have been preaching—advancing ideas upon a serious subject which may be more or less acceptable to some and objectionable to other people. Yet, I merely started out with the idea of establishing equilibrium in some minds which were beginning to totter under the strain of things. I really wanted to say "WHY WORRY?". Ages have rolled by, Peoples have come, flourished, declined and vanished, BUT the Mississippi today, as always, flows serenely along to the sea and the Moon follows the Sun. You will see no Universal disaster. Your children may see vast and what, to us, might seem terrible changes, but their grandchildren again will find the conditions under which *they* live quite natural and proper. Yet, some of them doubtless will

still be prophesying the "speedy end of the world".

You may have noticed that it is not usually the *young* who advance these ideas. It is not the *contented* old either. It is those who have "failed to find their field," usually those who "toil not (much), nor spin." They like to be fed but would not *fight* for their bone. They do not like to see other people *too* happy—which means happier than they are. Finally, as a rule, they are, at heart, fearful and cowardly and only feel really safe when they can load everything that irks or affrights them (and most things do) upon the shoulders of *their* God. They are so *un-God-like* generally, so pitifully ultra-animal that really those possessing a brighter spark of Divinity are compelled to pityingly class them with the cotton-tails!

The occultists tell us that occasionally a man appears who has five or six Cosmic spirillae in action. The average person, as you may know, is restricted to *four*. These spirillaed super-men "fifth (or sixth) Rounders" sense things we cannot know (*vide* the Yogis) and, supposedly, have gumption enough not to get their six whirling appendages tangled. Most of us have trouble enough with four in this incarnation—and there are people who should have two at most. Possibly the prophets of Evil have only *one*—and the end of that may have been amputated on some sub-plane?

Taking things by and large, it is safe to say that this people is better off today than any people who have lived. We may be going a little too fast for our own good; our young people may be—as indeed they are—intoxicated with the sheer joy of Life (and other things) and "Self Expression" may have become a Shibboleth which is overworked. Yet "from Salem to the Shimmy" is a long step in advance for FREEDOM, and from the Serf to the Twelve Dollar a day Unionist is another stride forward towards Liberty, Equality and Fraternity.

That those ride who walked; that those talk who were silent; that those wear fine linen and silk who formerly wore odorous rags, *means* something. It means that intelligence and industry are going hand in hand. It means that, sooner or later, a man will LIVE while he is alive—and his experience during the journey will teach him to die unafraid. A few generations of such men and it might be worth while to really desire reincarnation here. The

"Millenium" approaches—but with very slow and measured tread. It will probably come only when all men desire it and strive unitedly to make their desire a reality.

That, I would say in conclusion, is a more rational and cheerful belief than the Death, Hell and Eternal Damnation which our fearful B'rer Bunnies insist upon crowding down our throats by the spoken, printed and air-borne word. Vociferous they are; Veracious they distinctly are not.

For which, again, we should be duly thankful.

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#### "AND HOW?"

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The author of one of the most recent *Systems of Medicine* recommends (or is made by the pestiferous printer to recommend) the application, in Rheumatic Carditis, of "four or five leeches to the pericardium". Of course, if any difficulty is experienced in getting the leech to the right place it can be applied to the tympanum. It is only necessary to secure the leech.

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#### THE ORIGIN OF SPEECHES

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Plutarch: "I am sorry that I have no more lives to give to my country."

Samson: "I'm strong for you, kid."

Jonah: "You can't keep a good man down."

Cleopatra: "You're as easy as Mark Anthony."

David: "The bigger they are the harder they fall."

Helen of Troy: "So this is Paris."

Columbus: "I don't know where I'm going, but I'm on my way."

Nero: "Keep the homefires burning."

Solomon: "I love the ladies."

Noah: "It floats."

Methuselah: "The first hundred years are the hardest."

Queen Elizabeth to Sir Walter Raleigh: "Keep your shirt on."

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"What's the matter, old boy?" asked Jimmie's friend. "I've never seen you looking so seedy."

"I've got to go abroad at once," remarked Jimmie gloomily.

"Nonsense! These doctors mustn't frighten you out of your life like that."

"It wasn't a doctor. It was a lawyer."

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Questions and answers recorded by the Hon. Carl V. King, secretary of the Civil Service Commission of Los Angeles:

*Question.* If you found a man with a severe cut on the head that was bleeding freely, what would you do?

*Answer.* I would put a tourniquet on his neck.

*Q.* If you found a man with a dislocated hip, what would you do?

*A.* I would give him an emetic.

*Q.* What is a morgue?

*A.* A piece of paper held against property for borrowed money.

*Q.* What does habeas corpus mean?

*A.* The red corpuscles in the blood.

*Q.* What does urban mean?

*A.* A knowledge of herbs.

*Q.* What is a kleptomaniac?

*A.* A person with a mania causing him to lie unnecessarily.

*Q.* What is arson?

*A.* The act of trying to poison a person with arsenic.

*Q.* What is a moron?

*A.* A man who has more than one wife.

*The American Mercury.*

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#### HAPPINESS

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"Why are we unable to describe happiness? Because HAPPINESS is a state of mind. It is produced by the co-ordination of several indescribable forces, such as appreciation, sincerity, loyalty, hope, kindness, joy, etc. A happy man or woman is never in a hateful state of mind. A hateful person may be maliciously vindictive and sarcastically gloat over their own mental powers; but they are not happy. That is, happy like the child that has but few subconscious memories to recall into its mental pictures. Happiness, we think, is the product of many mental impressions that have been unconsciously blended together in the state of mind. And that state of mind, must be working without friction, and be properly motivated before it releases the gland secretions into the blood to produce a feeling of thrill, exhilaration and pleasant response. Happiness has no value to the mind which has not experienced sorrow and grief and loss. A person can be happy and yet not realize that they are enjoying one of the most valuable possessions in the mental realm."

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# Thumbnail Therapeutics

## VACCINE THERAPY

Vaccines are indicated in chronic diseases and for prophylaxis. Their use in large doses, especially in acute conditions, should be avoided.

In treatment the dose should begin with 1 minim and be increased very slowly. For prophylaxis, larger doses are required.

If more people would be vaccinated with "cold vaccines" every autumn, much illness and many deaths would be prevented. DR. ORVILLE H. BROWN, in *S. W. Med.*

## HERPES ZOSTER

The pain of herpes zoster is frequently relieved almost immediately by the hypodermic injection of a 1-1000 solution of epinephrin. A dose of 0.5 Cc. may be repeated at intervals of 5 minutes until pain is relieved or an epinephrin tremor develops. If the pain returns later the dose may be repeated.—DR. W. W. DUKE, of Kansas City.

## URINARY ACIDITY IN SKIN DISEASES

Seborrheic eczema, acne, prickly heat, carbuncles, abscesses, boils and generalized prurigo clear up rapidly under suitable administration of alkalis. Sodium bicarbonate, 30 grains; potassium bicarbonate, 25 grains; and potassium citrate, 15 grains, should be given three times a day, between meals, the dose being increased or diminished according to the acidity of the urine.—DR. F. C. DOBLE, of London, Eng.

## WARTS

A patient with multiple warts of the scalp whose lesions had resisted many forms of treatment, including x-rays and fulguration, cleared up promptly and permanently, following two intravenous injections of neoarsphenamine, given 3 weeks apart.—DR. H. C. L. LINDSAY, in *Arch. Derm. & Syph.*

## PREVENTION OF DIABETIC COMA

Realizing that a diabetic patient cannot detect the onset of coma, every such patient should be instructed that, whenever he feels ill he should: (1) telephone to his physician; (2) go to bed; (3) get someone to wait on him and thus reduce unnecessary

exertion; (4) drink at least a cupful of some hot liquid—water, tea, coffee, broth—every hour; (5) keep warm; (6) take an enema.—DR. E. P. JOSLIN, in *Bost. M. & S. J.*

## TEA AND COFFEE

When tea and coffee are made moderate in strength and taken in reasonable quantities, they are gentle stimulants and their effect upon the nervous system is salutary. If they are *boiled* and taken immoderately, they weaken the nervous system and may lead to serious or fatal consequences.—*Med. Rev. of Rev.*

## SCIATICA

Sciatica is often relieved by five grains of sodium bicarbonate at bedtime, followed in the morning with a saline laxative. Many cases of sciatica are due to a distended colon.—*Ther. and Diet. Age.*

## PSYCHIC SYMPTOMS

If regular practitioners paid more attention to the psychic anomalies and psychic symptoms of their patients, the field of the Christian scientist, the chiropractor and the irregulars generally would be greatly restricted.—DR. LEWELLYS F. BARKER, of Baltimore.

## COAGULATION TIME

If the blood coagulates slowly, give calcium for 2 or 3 days before operation. A dose or two, a few hours preoperative, is without effect as the coagulation time does not begin to decrease for about 24 hours.—DR. MAX KERN, of Chicago.

## FRACTURES AND DISLOCATIONS

Fractures and dislocations can be reduced much more easily if the affected parts are first treated with static sparks or the static wave to relax the muscles.—DR. WM. B. SNOW, in *A. J. of Electro-Therap. & Radiol.*

## GONORRHEA IN WOMEN

On retiring, the patient takes a douche of warm water and inserts a suppository of 2-percent mercurochrome up into Douglas's pouch, protecting her finger with a finger-cot. This is repeated every night

for 14 nights, the patient wearing a napkin constantly. After this treatment all symptoms subsided and the adjacent structures were found free from gonococci.—DR. JOHNSON, in *Boston. M. & S. J.*

#### PILES IN LABOR

If painful hemorrhoids present during labor, the injection of a 1-percent solution of quinine and urea hydrochloride into the base of the pile will give almost immediate relief.—Dr. A. I. Lovell, of College View, Nebr.

#### HARMFULNESS OF SODIUM BICARBONATE

The statement is made that the continued use of sodium bicarbonate in treating indigestion is harmful. For correcting gastric hyperacidity, the dibasic and tribasic salts of calcium and magnesium with phosphoric acid are far better.—*Pharmaceutical Advance.*

#### INDICATIONS FOR CASTOR OIL

*Diarrhea.*—Give enough to clear the bowel.

*Constipation.*—Moderate doses when the bowels have not moved for several days.

*Autointoxication.*—Free purgation.

*Prior to parturition.*—To required effect.

*Neuralgia.*—Small doses, frequently repeated to analgesic effect. Violent purging is not necessary.—*Pharmaceutical Advance.*

#### OTOSCLEROSIS

Otosclerosis is not, primarily, an ear disease but is a disorder of nutrition and metabolism. Give calcium to all such cases and the disease may be arrested, if not relieved.—DR. BROWN, of Buffalo, N. Y.

#### POSTOPERATIVE VOMITING AND HICCUGH

*Strontium bromide*, 20 Cc. of a 10-percent solution, given intravenously, is a wonderful sedative in postoperative vomiting and hiccough.

It also seems to have a favorable effect in cases of *weeping eczema*.—DR. B. F. CROUTCH, of Chicago.

#### ANODYNE LINIMENT

A liniment which exerts a direct anodyne influence on the nerve endings is popularly known as "*A. B. C. Liniment*" and is composed of 30 Cc. each of tincture of aconite, fluidextract of belladonna and chloroform, with sufficient soap liniment ("*Opodeldock*") to make 240 Cc.—DR. BERNARD FANTUS, of Chicago.

#### ARGYROL WITH COCAINE

Cocaine hydrochloride is incompatible with all solutions of silver salts, as it forms insoluble silver chloride. If it is desired to combine cocaine with argyrol the nitrate of the alkaloid must be used.—E. KNOTT, in *Pharm. Journ.*

#### INTESTINAL PARASITES

A mixture of oil of chenopodium (40 percent) and carbon tetrachloride (60 percent) is recommended for the treatment of hookworm and other forms of intestinal parasitosis. The dose is 2 drops of the mixture for every year of the patient's age (up to a maximum of 2 Cc.), given at one time in castor oil.

#### TRANSFUSION IN INFANTS AND CHILDREN

When hemorrhage occurs in infants and young children, as in *melenia neonatorum* and *scarlatina*, transfuse whole blood from one or other of the parents.

#### TYPHOID

If you suspect typhoid, do not give the patient purgatives, which will upset the digestive tract and light up infection.—DR. S. P. REES, of Minneapolis.

#### DIABETES

In treating diabetes the points of chief importance are: (1) the quantity of sugar excreted day by day; (2) the presence or absence of ketones; (3) treatment by regulating the quantity and quality of the diet, or by giving insulin if dietetics prove inadequate; (4) the blood sugar (in special cases).—EVE, in *Brit. M. J.*

#### ETHER IN WHOOPING COUGH

Intramuscular injections of ether, given in the gluteal region, give prompt and gratifying relief in cases of whooping cough.

I give  $\frac{1}{2}$  to  $\frac{3}{4}$  Cc. to children under 1 year old; 1 Cc. if over 1 year; adults, 2 Cc. The doses are given 2 or 3 days apart. More than 4 doses have never been required.—DR. ARNO C. VOIGHT, Hawley, Pa.

#### CARBUNCLE

Make a crucial incision extending beyond the indurated area. Undercut each of the four sectors, parallel with the skin and midway between it and the deep fascia, forming four flaps. Pack pads of gauze soaked in some chlorine antiseptic under each flap. After 24 to 48 hours, remove these pads and start systematic Dakinization.—DRS. LEE & DOWNS, in *Therap. Gaz.*

**FOREIGN BODIES IN THE NOSE**

Carefully apply a 2- to 5-percent solution of cocaine to the external meatus with a cotton swab; spray the nose with adrenalin (epinephrin) and wait for the mucosa to shrink thoroughly. When this is properly done, you can pass a very thin, flat ear curette or scoop under the foreign body and remove it without pain or traumatism.—**DR. JOHN S. KIRKENDALL**, of Ithaca, N. Y.

**EXERCISE BY RADIO**

Numerous doctors are reporting that where directions for setting up exercises, with music, are available over the radio it appears to be much easier to get their patients to cooperate and take the exercises regularly than by any other method heretofore used. The results are highly gratifying.

**PREVENT CARBON MONOXIDE POISONING**

No matter how cold it is, when you start your auto in the garage, always remember to open the doors and windows before you turn on the ignition of the machine; then you will be sure to enjoy a longer life.—**DR. H. N. BUNDESEN**.

**SAUER KRAUT INCREASES MILK**

Several women who were nursing their infants have reported that the eating of raw sauer kraut has produced a noticeable increase in the secretion of milk.

**PRECAUTIONS IN GIVING BISMUTH**

It is necessary to have the teeth put in good condition before beginning a course of bismuth; and the use of the drug should be suspended following the appearance of albuminuria.—**HUDELO and RABUT**, in *Presse Med.*

**BISMUTH COMPOUNDS IN SYPHILIS**

Potassium bismuth tartrate and bismuth compounds generally are much less toxic intramuscularly than intravenously.

Bismuth compounds are powerful enough to eradicate experimental syphilis in rabbits. The arsphenamines have higher chemotherapeutic indexes than bismuth compounds, but bismuth takes the second place, being distinctly superior to mercury.—**RAIZISS and SEVERAC**, in *Archiv. Dermatol. and Syph.*

**WRITTEN INSTRUCTIONS**

In addition to giving your patients medicines with directions for taking them, you give them advice and instructions as to their mode of life and conduct. If you will *write out* this advice and these instructions your results will be better from every standpoint.—**DR. J. MADISON TAYLOR**, of Philadelphia.

**PSYCHOANALYSIS IN EPILEPSY**

Adult epilepsy, excluding the types caused by trauma and organic disease, is amenable to treatment by psychologic means (psychoanalysis), and unless a patient is so treated, nothing of permanent benefit can be accomplished.—**DR. R. B. TRACY**, of Butte, Mont.

**ORANGE JUICE IN ACIDOSIS**

In acidosis following anesthesia it is customary to administer alkalies and glucose. The pleasantest way to do this is to give orange juice, 200 Cc. of which contains 20 Grams of fruit sugar and 6 Grams of mineral ash. The acids of the juice are oxidized to bicarbonates.

Give the patient 200 Cc. of orange juice, night and morning, for one or more days before operation. The results are highly satisfactory.—**DRS. M. G. WOHL and B. H. HARMS**, of Omaha, Nebr.

**FRACTURES IN LACTATING WOMEN**

When women who are nursing an infant suffer a fracture, union is frequently delayed, due to the fact that the calcium in the mother's blood is going, very largely, into the milk. Ultraviolet irradiations will often correct this condition and result in prompt healing.—**DR. J. C. ELSOM**, Univ. of Wisconsin.

**NUTRIENT ENEMATA**

The only substances of food value that can be absorbed from the lower bowels are amino-acids, simple sugar and alcohol. Corn syrup (Karo) is practically pure glucose and is readily obtained. It may be given, with alcohol, well diluted in physiologic salt solution, by the drip method, two or three times a day. Not more than 10 ounces should be given in one day.—**DR. P. H. DESNOES**, of New York.



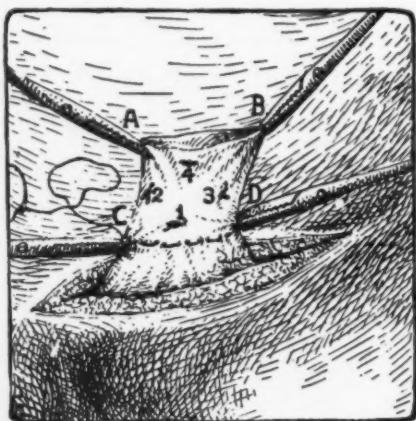
# Current Medical Literature

## SUTURING THE HERNIAL SAC\*

The cause of recurrence of hernia after operation is to be sought in the fact that the time-honored method of closing the sac by transfixing and circumligating results in a funnel-shaped impression at the internal abdominal ring.

For a number of years Dr. V. Pleth, of Stockton, Calif., has used a method that restores the normal contour of the peritoneum around the internal ring, thus preventing the formation of a point of least resistance.

The intraabdominal pressure, so extensively investigated by the late Alexander Ferguson, has not been satisfactorily determined as yet, but appears to be an important factor in the production of hernia.



Pleth's procedure, as reported in the *Am. J. of Surg.* for July, 1925, is as follows:

- 1.—Sac is opened widely and explored.
- 2.—Two forceps are attached to edges of sac A, B, and traction is applied by assistant, lifting sac upward.
- 3.—Operator inserts index finger of left hand into sac and feels for level of ring.
- 4.—A forceps is now applied to outside of sac, opposite end of left index finger inside sac.
- 5.—Another forceps is applied in similar manner, at diametrically opposite point, just enough of sac being caught by forceps to permit its holding on. (Forceps at C, D, are applied in such manner that an imaginary line connecting their tips is parallel with natural axis of inguinal canal.)

\*Suturing the Hernial Sac. V. Pleth, M.D., Stockton, Cal. *Am. Jour. Surg.*, 39:166, July, 1925.

6.—Assistant now applies traction upward upon forceps C, D.

7.—Operator applies running suture to sac, starting at end of forceps C or D and running in a straight line CD, uniting opposed layers of sac.

8.—Operator's finger, wrapped in gauze, is inserted into interior of sac and forcibly rubbed to irritate serosa, favoring early fusion of opposed layers of sac.

9.—Three or four interrupted sutures of fine catgut unite opposed walls of sac. (1, 2, 3, 4.)

10.—Sutured area of sac, A, B, C, C, D, is now turned downward and upward and stitched to convenient point of fascia of internal oblique.

11.—Operation is finished according to operator's desire—Bassini, Ferguson, etc. Pleth prefers Ferguson's method.

A patient operated upon a year previously, died from an intercurrent disease and an impression of the region around the internal inguinal ring was secured by pouring plaster-of-Paris into the inguinal fossa.

Before pouring the plaster mixture into the abdomen, a stout needle was passed through the scar of the hernia incision and made to traverse the abdominal wall and project through internal abdominal ring, a short distance into the abdomen.

When the plaster had set, the needle was withdrawn and the cast lifted out, showing an absolutely smooth contour of the peritoneum at the internal abdominal ring, with no tendency to dimpling or funnel formation. Pleth regards this interesting postmortem finding as significant.

Abstract reprinted from *Notes and Abstracts (J. & J.)* for October, 1925.

## CIRCULATORY STIMULATION IN PNEUMONIA

Many physicians give digitalis as a part of the routine treatment of pneumonia. Sometimes this is sound treatment, but not always.

In an article in the *N. Y. M. J. and Rec.* for October 18, 1922, Dr. Herman Fried, of New York, called attention to the fact that death in pneumonia is by no means always due to heart failure, but frequently results from *vasomotor paralysis*.

Dr. Fried calls upon us to remember:

1.—That there are definite and clear indications for different stimulants in lobar pneumonia.

2.—The prevalent belief, that cardiac failure is the most frequent cause of death in this condition, is erroneous.

3.—The circulatory embarrassment that actually occurs, and which most frequently is the cause of death in croupous pneumonia, is *vasomotor paralysis*.

4.—The drugs known as vasoconstrictors will most often be indicated in this disease.

5.—Routine digitalization and the tendency to follow routine measures in the treatment of lobar pneumonia are reprehensible and should be discouraged.

6.—That the symptoms of vasomotor paresis are a falling blood pressure, rapid pulse, pallor, sweating, cardiac arrhythmia, abdominal distension, progressive prostration and stupor and they indicate the use of *atropine*, *strychnine*, *epinephrin*.

7.—That the symptoms of cardiac deficiency are cyanosis, venous distension, tachypnea, a weak pulmonic second sound, high pulse rate muffling of the first sound, enlargement of cardiac dullness to the right impaired urinary output, hepatic pulsation, and pulmonary edema, and these symptoms clearly indicate the use of cardiac stimulants such as digitalis or its group.

#### TREATMENT OF ANTERIOR POLIO-MYELITIS WITH X-RAYS AND DIATHERMY

In *Le Monde Medical* for Sept. 15, 1925, Prof. H. Bordier, of the Faculty of Medicine, of Lyons, France, speaks highly of the treatment of acute or chronic cases of anterior poliomyelitis by means of x-rays and diathermy.

Prof. Bordier calls attention to the fact that, in the x-rays, we have an agent capable of penetrating to the affected cells in the anterior horns of the cord; while in diathermy, applied to the palsied limbs, we find an effective method for overcoming vasomotor spasm and maintaining the nutrition of the affected muscles.

The technic of the x-radiations is of the highest importance and failure follows lack of attention to details. The cells supplying the motor functions of the lower limbs are situated between the 11th dorsal and the 1st lumbar vertebrae, and it is here that the rays must enter, and not over the sacral plexus or the *cauda equina* which consists wholly of nerve fibers. If the upper limb is affected the radiations should be over the 3rd to 6th cervical vertebrae, where the corresponding cells are located.

Bordier's method seems to offer an interesting field for research in the treatment of this distressing and baffling disease, and he backs up his statements by detailing several cases illustrating improvement under this treatment.

#### TONSILLECTOMY IN RURAL PRACTICE

Dr. L. A. Hulbert, of Springville, N. Y., believes that, under ordinary circumstances, tonsillectomy can safely be performed in the physician's office, or even, if necessary, in the patient's home. He sets forth his ideas and his technic in the *M. J. & Rec.*, New York, for Sept. 2, 1925.

In patients under 15 years of age, the doctor used ether as a general anesthetic; in those above that age the anesthetic was local, with novocaine (procaine) and suprenin (epinephrin).

Great stress was laid upon complete hemostasis at the time of operation. The ether cases remained at the office for 3 or 4 hours before going home; the local cases were permitted to go immediately after the operation. In only three cases was there slight hemorrhage, which was readily controlled by direct pressure.

Difficulty of swallowing was much relieved by permitting a powder of 2½ grains of acetylsalicylic acid and ½ grain of acetanilid to dissolve on the tongue occasionally.

Results are reported on 100 consecutive cases operated upon outside of a hospital. Of these 100 cases, 48 percent were cured of all symptoms by the operation; 49 percent were greatly improved; and 3 percent were unimproved.

Tonsillitis and sore throat were decreased 80 percent in the tonsillectomized children. The tendency to winter colds, eye infections and diphtheria was reduced. The incidence of measles was not affected.

#### PSYCHIC FACTORS IN HYPER-THYROIDISM

Dr. Nolan D. C. Lewis, of Washington, D. C., believes that certain psychological disturbances, such as emotional stress, psychic traumata and sexual repression, are among the prime etiological factors in many if not all cases of hyperthyroidism.

He sets forth his thesis very ably in the *N. Y. M. J. & Rec.* for August 5, 1925, and backs it up with many references and convincing arguments.

The familiar fact that thyroid disturbances are closely associated with normal and abnormal changes in the generative organs, especially in women, is cited, and also the universal observation that hyperthyroidism is rare before puberty.

He feels that many of the symptoms occurring in Graves' disease are not caused by the thyroid disturbance, but are coincidental manifestations of a perverted or abnormal condition of the general constitution, and that exophthalmic goiter is an aggravated form of anxiety neurosis—a "structuralized fear at the symbolic level".

The bibliography of this article contains 30 references for those who wish to follow the matter up.

#### BIOLOGY OF HEALTH

Writing in the *American Mercury* for December, 1925, Raymond Pearl reminds us that sound health and longevity do not always go together. It is not uncommon to see people who are frail and sickly live to a ripe old age, nor to see those who are in robust health die in early middle life.

Pearl believes that the fact that man is an animal—a mammal—has certain distinct bearings upon the problem of health and disease, the essence of the whole matter being in the adaptability of the living organism—its power to do something to meet any situation which may arise, in such a way as to favor the survival of the doer.

All living organisms, from the lowest to the highest, show this adaptability more or

less, and the more they show it the longer they survive.

A particular illness of a particular person may be caused by: (a) something internal, innately peculiar to the patient's biological make-up (which is very rare); or (b) some deleterious agent wholly external and foreign to the patient (equally rare); or (c) by a combination of (a) and (b)—this includes most diseased conditions.

The chief factor in determining whether a person remains in health, or recovers his health when he has lost it, is his innate biological power of adaptive self-regulation to the normal. If he has this power to a high degree he gets well and stays well, the wise physician often greatly aiding the process; if he lacks it he stays ill and frets the honest doctor who is doing his best to accomplish a task at which Nature has failed.

Medicine can do four things to aid the organism in its adaptive regulatory efforts:

1.—Reduce the deleterious agents which can upset the organism from without.

2.—Aid the organism *directly* in its regulatory efforts, as by the use of diphtheria antitoxin or arsenic in syphilis—here the physician literally *saves lives*.

3.—Help *indirectly* to increase the adaptive powers by favorably modifying the internal and external conditions of the patient, as by rest and forced feeding in tuberculosis.

4.—Alter the structure of the body by the removal or repair of damaged parts or organs—the field of surgery.

Pearl sums up his philosophy in the following words:

"Live as a Christian Scientist is supposed to live—without thought or fear of disease. But, when you feel ill, consult a physician at once and follow his instructions implicitly. He knows better than anybody else how to help you."

#### INSULIN IN GENERAL PRACTICE

In the *Bul. Chicago Med. Soc.* for Jan. 23, 1926 Dr. A. C. Hammett, of Chicago, said that he began to use insulin in May, 1923. The number of units to be taken by a patient in a day varies from five to thirty, divided into one, two or three doses. There is no way to determine in advance what a patient will require and each case must be tried out with caution. In some instances as high as twenty-five units have been given three times daily. Before starting treatment, the patient should have a thorough physical examination and several days observation in the hospital to determine the blood sugar, the amount of sugar in the urine and the amount of acetone. One must not overlook certain conditions which may produce a transitory or temporary presence of sugar in the urine, such as a recent anesthesia, shock, head injuries, strong emotions, sudden increase of adrenal secretions, mental strain from studying, or eating excessive amounts of carbohydrates.

Dr. Hammett believes that the urine should be examined in the case of every pa-

tient coming to this office, for in this way the presence of disease can be discovered and the necessary treatment instituted. He considered the test for acetone very important, along with the qualitative and quantitative tests for sugar.

The next step is the determination of the blood sugar. If the patient has a low percentage of sugar in the urine and not much acetone, it is well to have him bring in a twenty-four hour specimen of urine daily for five to ten days, make a quantitative analysis and keep a daily record, without putting the patient on a special diet. When a fairly good sugar average has been established, treatment should be begun. If acetone is present in the urine and the sugar percentage quite low, 1 percent or less, one should take immediate measures to eliminate the acetone. If there is a high percentage of sugar the patient should be sent to the hospital without delay for proper observation and care.

In all cases of diabetes, mild or severe, diet is the first consideration. Patients may be treated by diet alone, or by diet and insulin. Since over-eating is largely responsible for the disease, the logical thing is to cut down the quantity eaten, when many of the symptoms will disappear within a short time. The diabetic diet should contain not more than one-half the amount of carbohydrate found in ordinary products of the same class. One unit of insulin when injected into a diabetic will enable him to utilize one to two additional Grams of carbohydrates.

After getting the patient under control and establishing a definite diet and a regular dose of insulin, the next step is to educate the patient so as to get full cooperation in all ways. This education should begin from the first contact with the patient, and must often include some other member of the family. Typewritten instructions should be given, outlining the daily routine in every particular. Recently Dr. Hammett has been giving his patients a copy of Joslin's *Diabetic Manual*, giving them regular lessons and marking what they shall read. While they may not fully understand everything they read, they get a good working idea, especially of dietary matters, and the *Manual* is very helpful in many ways.

Among the important points to be kept in mind Dr. Hammett mentioned (1) care of the teeth. The mouth should be kept free from infection, for bad teeth play an important part in the tolerance of carbohydrates in diabetics. (2) Exercise, which should be regular but not severe. (3) Weight, it is always desirable that a patient shall regain most of the lost weight, which he can do under proper diet and insulin. Care must be taken not to give too full a diet or too much insulin and the weight should be kept about 10 percent below normal. (4) Salt—these patients should not have too much salt, as it causes too much fluid to be retained in the body and may produce dropsy. Patients should be supplied with note books and keep a daily record of diet, urine and insulin, and these

books should be checked by the doctor at frequent intervals for they often make mistakes in their uranalysis.

### THE ROENTGENOLOGIST AND THE ATTENDING PHYSICIAN

Dr. Edw. S. Blaine, of Chicago, discusses, in the *Radiol. Rev.* for Sept.-Oct., 1925, the relations which should exist between the radiological consultant and the attending physician and brings out some interesting and pertinent points.

1.—An x-ray examination is special medical work; the object in view being a diagnosis—not pictures.

2.—An x-ray diagnosis is of value only when the shadows obtained are correlated with history, symptoms, clinical findings, etc.

3.—X-ray examinations and treatments should be performed only by qualified physicians who have had special training and experience in the work.

4.—Patients should never be given any plates or prints, but should be advised that they are paying for an x-ray diagnosis—not for pictures.

5.—The roentgenologist is a medical consultant and is entitled to fees and consideration on that basis.

### EARLY DIAGNOSIS IN CRETINISM

The physical improvement which follows the administration of thyroid substance in cases of cretinism is very remarkable, but is not always associated with a corresponding improvement in the mental condition. In fact, Dr. Kerley, of New York, whose paper appears in the *A. J. Dis. of Child.*, for September, 1925, feels that the mental improvement depends quite directly upon how early the treatment is begun.

In the discussion of the paper Dr. Talbot called attention to the fact that the brain develops very rapidly during the first six months of life, while cretinism is rarely diagnosed before the 8th or 9th month, and frequently not until the child is three or four years old.

Early diagnosis (as early as 3 months) can frequently be made by means of basal metabolism tests and by the clinical signs of a peculiar, lemon-yellow tint under the skin of the cheeks, a thick tongue, coarse hair and a peculiar, hoarse voice.

The dosage of thyroid must be determined for each case, and should begin at 1/10 grain daily and be gradually increased to the point of tolerance or maximum effect. Irritability, sleeplessness, enuresis and a tendency to epistaxis indicate that the dose should be reduced; physical and mental lethargy, that it should be increased.

### CASCARA

The bark of the tree *Rhamnus Purshiana*, from which cascara is made, is steadily growing scarcer as the demand exhausts the supply. The price of the bark has more than quadrupled in the last few years.

R. H. Clark and K. B. Gillie, of the Department of Chemistry, University of British Columbia, have been carrying on a series of experiments to see whether or not the wood of this tree, which grows on the western slope of the Cascade mountains, possesses the same purgative properties as the bark. Their investigations have shown that the wood contains 71 percent of the amount of the cathartic principle found in the bark, which renders it available as a commercial source of supply for cascara.

The results of the work of these investigators appears in the *A. J. of Pharm.* for June, 1924, and the *Vancouver M. A. Bul.* for October 1, 1925.

### THE VALUE OF SULPHARSPHENAMINE

Much discussion has arisen regarding the clinical possibilities of sulpharsphenamine and the indications for its use.

In a thoughtful and valuable paper in the *A. J. of Syph.* for July, 1925, Dr. James C. Fox, Jr., of New Haven, Conn., sets forth the results of a study of the use of this drug in 58 cases, who were given 678 injections, and summarizes the work as follows:

1.—Sulpharsphenamine was given intramuscularly or subcutaneously in doses as high as 0.6 Gram without causing a significant local reaction except in an occasional case, provided a solution of 33 percent concentration was used.

2.—The intramuscular or subcutaneous administration of the drug in patients in the secondary stage produced a slower healing effect on cutaneous and mucous lesions than is usually obtained with the other arsphenamines given intravenously. However, the end-results, as judged by absence of clinical recurrence and effect on serology, compare favorably with those produced by the other arsenicals.

3.—No superiority was shown for the drug in the treatment of patients with neurosyphilis, either when administered in the first instance or when given to patients known to be resistant to the other forms of treatment.

4.—Evidence was not obtained that the drug possessed particular value in reversing the serology of the Wasserman-fast cases or in influencing favorably the clinical course of patients with disease of the cardiovascular system.

5.—The drug was found useful in treating three patients who had previously developed "shock" or "nitritoid" reactions after intravenous injections of the other arsphenamines.

6.—The route of administration seemed to play little or no part in determining the therapeutic effect but was found to be of considerable importance so far as systematic toxic reactions were concerned. In this connection intramuscular injection was found to be the method of choice.

7.—Dermatitis was found to have a relatively high incidence in our series of cases showing a total of 6 cases in 678 injections. It is important that three of these occurred



among the 110 injections administered intravenously as compared with only one among 302 given intramuscularly.

8.—One patient, previously known to be intolerant to the other arsenicals, developed a severe grade of anemia of an aplastic type, but without purpura, following one course of seven subcutaneous treatments of 0.4 Gram each.

9.—Because of the higher incidence of systematic reactions following the use of this drug, it seems desirable to confine its employment solely to those cases in which intravenous therapy cannot be used. Further study is especially indicated to determine the nature of this toxic factor in its composition and whether it can be eliminated. In the meantime sulpharsphenamine must occupy a restricted but nevertheless very useful place in the treatment of syphilis.

#### STATUS HYPOPLASTICUS

Dr. Walter Timme, of New York, believes that the term used in the title is preferable to the old name, Status Thymolymphaticus, because the thymus is not necessarily involved in the syndrome.

In the *M. J. & Rec.*, for November 4, 1925, he states his belief that the condition is not uncommon, and that it should be diligently searched for in childhood, while a study of the endocrine features of such cases can still result in the prevention of early death or lifelong disability.

The anatomic features of this condition are an underdevelopment of the cardiovascular system and the endocrine glands; and overdevelopment of the lymphoid structures, such as the tonsils, thymus, lymph nodes, spleen and liver; and an inadequacy or flail-like condition of the joints, which predisposes to subluxations, flat feet and sacro-iliac strains.

Examination of the blood shows a high relative lymphocytosis, long coagulation time, low blood sugar and low alkaline reserve. These conditions predispose to easy fatigability, purpura and internal hemorrhages (frequently resulting in sudden death), and the development of acidosis upon slight provocation.

If these patients survive to middle life, they frequently suffer from "endocrine headaches", due to compensatory enlargement of the pituitary.

No panacea is offered for the treatment of these cases, but their recognition and careful study is strongly urged.

#### TREATMENT OF BILHARZIA WITH INTRAVENOUS INJECTIONS OF TARTAR EMETIC

Schwarzwald tells us that there are about 11 million persons affected with bilharzia in India, and that about 500,000 died yearly, as a result of this condition. In the case which forms the basis of this article, treatment consisted of the injection of tartrate of antimony intravenously for 12 days successively, beginning with 0.03 Gram, then giving 0.06 Gram, and from this time on until the twelfth day 0.1 every day, until

the total amount of 1.09 had been given. Even following the second injection the improvement was marked and the patient was entirely cured at the end of the course of treatment. (*Ztschr. f. urol. Chir.*, 16:117-120, 1924.)

#### THE USE AND ABUSE OF X-RAYS IN THE TREATMENT OF COMMON SKIN DISEASES

Roentgen-rays are of definite value in the treatment of certain skin diseases, but useless in others, so that correct diagnosis and careful dosage are essential to success.

Eczema and the general group classified as dermatitis are amenable to this treatment.

In acute eczema where there is exudation and considerable moisture, x-rays are of small value, but after the acute stage has passed, the rays have a very rapid curative effect.

In a series of 120 cases, 90 were cured within a month. One-fourth of a skin unit was given weekly except in eczema of the scalp where only one-eighth of a skin unit was given. This treatment has proven of particular value in resistant cases of infantile eczema.

Of the diseases due to pyogenic organisms, sycosis vulgaris is the most amenable to x-rays, paraonychia second, chronic furunculosis third.

About 90 percent of acne vulgaris cases respond, but not more than sixteen doses of one-fourth a skin unit each should be used.

In erythema nodosum, pityriasis rosea, lupus erythematosus, rosalia, nevus pigmentosa, keratoris follicularis and similar conditions, the author has found x-rays of no value.—Dr. E. D. Crutchfield, of Galveston, Tex., in *New Orl. M. & S. J.* for Jan., 1925.

#### CAUSE AND DIAGNOSIS OF HEADACHE

In the *Annals of Clin. Med.* for August, 1925, Dr. W. Cabell Moore, of Washington, D. C., contributes a thorough and instructive study of the etiology and differential diagnosis of headache.

He divides the cases into three groups: An intracranial, a cranial, and an extracranial group, and calls attention to the fact that, while headaches of recent origin, accompanied by other symptoms, can be readily understood, the chronic cases frequently tax the diagnostic skill and acumen of the physician to the utmost.

The study of these cases should follow a definite plan and a complete and detailed history is extremely important. The length of time the headaches have been occurring; the location, character and severity of the pain; the time of occurrence and duration and frequency of attacks; and the associated signs and symptoms may all throw much light on the problem.

A thorough physical examination, including laboratory tests, and, in certain cases, x-ray studies and consultations with a



rhinologist and a neurologist, should never be overlooked, and all findings should be carefully recorded.

The conditions most frequently causing severe headache as an independent symptom are focal infection, kidney disease, ocular disease, indigestion, functional dyspituitarism, migraine, and organic brain disease. Nasal sinus abnormalities and cervical rib should not be forgotten.

The diagnosis can be made only by exclusion and a therapeutic test; and the only proof of a correct diagnosis, in many cases, is the ability to give relief.

#### ETHER EXPLOSION IN THE THROAT

An editorial in the *Brit. Med. J.*, for October 17, 1925, relates a very unusual anesthetic accident.

A young man with a fractured jaw was having a splint applied with dental cement, under ether-oxygen anesthesia. An air syringe, such as dentists ordinarily use for drying the teeth with warmed air, was being employed for that purpose in this case. The lamp at which the syringe was being warmed was fully six feet away from the operating table, and the syringe itself was at no time red-hot.

When the anesthesia had continued for 25 minutes, and the operation was nearly over, there was suddenly an explosion in the back of the patient's throat; acute hemorrhage followed and, despite every effort to save him, he died in 10 minutes. The autopsy showed that death was due to rupture of the bronchi and collapse of the lungs.

Percival P. Cole, the surgeon who performed the operation, said that he did over 1,600 similar operations, during the War, without any mischance, and had never heard of a similar accident nor seen one reported in the literature.

#### DYSENTERY AND MALARIA

In an article in the *M. J. & Rec.* for November 4, 1925, Dr. Geo. B. Lake, of Chicago, discusses various tropical diseases and infestations with animal parasites.

Regarding tropical or amebic dysentery he suggests as a remedy the hypodermic administration of  $\frac{1}{2}$  grain doses of *emetine*, three times a day for ten successive days; or the oral administration of the double iodide of bismuth and *emetine*, in daily doses of three grains, for 12 days.

In bacillary dysentery the patient should be kept strictly in bed, with adequate coverings, on a diet of albumen-water, strained cereal gruels, meat juice, jellies and sago pudding. Milk should not be used and lactose should take the place of cane sugar.

Sixty grains of sodium sulphate may be given every 2 or 3 hours until the stools lose their dysenteric character.

The use of appropriate serums in these cases gives best results and reduces the mortality from 30 to 80 percent. The adult dose is from 20 Cc., subcutaneously, to 100 Cc., intravenously, depending upon the severity of the case.

The use of quinine, in 5-grain doses daily, or 15 to 20 grains once a week, is a valuable prophylactic against malaria, supplementing the usual hygienic measures.

In the treatment of malaria, 10 grains of quinine should be given by mouth, three times a day until the temperature has been normal for 5 days; or quinine and urea hydrochloride may be given intramuscularly—10 grains in 2 Cc. of water—daily for one week; weekly for one month; and every two weeks during the second month. This solution must be autoclaved in order to be safe for use.

Neoarsphenamine has been used intravenously, by some observers, with excellent results.

#### INDICATIONS FOR THYROID THERAPY

In the *Therap. d. Gegenw.*, 1925, No. 3, Prof. Fr. Müller, of Munich, suggests that, aside from cretinism and myxedema, the following conditions call for the use of thyroid preparations:

1.—In many young women the neck becomes markedly thin and hollow after the birth of the first or second child, apparently because pregnancy caused exhaustion and atrophy of the thyroid gland.

2.—Abortive forms of myxedema are not seldom seen in elderly women who consult the physician on account of mental and physical fatigue; they feel cold, their skin is dry; they feel they are growing lazy, incapable of making up their minds readily; they have a tendency to become stout, especially around the hips; their sexual impulse has diminished very much; and in some cases there is also considerable anemia. In cases of this kind, Müller says 0.1 to 0.2 Gm. daily of dried thyroid gland (equivalent to 0.0001 to 0.0002 Gm. [1/640 to 1/320 grain] of thyroxin) usually suffices to remove the symptoms and to stimulate the mind.

3.—The same quantities, given consistently, may have a remarkable curative effect in ichthyosis, psoriasis, and scleroderma, in some forms of chronic articular disease, in obstinate edema of renal origin, and in obesity.

# New Books

## MELLISH: WRITING MEDICAL PAPERS

THE WRITING OF MEDICAL PAPERS. By Maude H. Mellish. Second Edition, Revised. Philadelphia and London: W. B. Saunders Company, 1925. Price \$1.50.

There is no longer any question in the minds of thoughtful persons that the writing of medical papers is one of the most useful exercises in which a physician can indulge. It crystallizes his professional knowledge; clarifies his ideas; gives him facility in handling words—which is always an asset; and makes him and his work known to other physicians.

The difficulty in the way of many who would like to write is a lack of knowledge of the technic of preparing a medical paper. This lack need no longer continue, for here is a volume which will supply the required information.

The author has set forth in a clear, brief and orderly manner all that is necessary to be known from the standpoint of rhetoric, phraseology, punctuation and all other more or less mechanical features, as well as regarding the character of the material to be presented.

This little book is heartily recommended to all who have an ambition to contribute to the literature of medicine.

## LISTER AND THE LIGATURE

LISTER AND THE LIGATURE. A Landmark in the History of Modern Surgery. Compiled by The Research Readers of the Scientific Department. New Brunswick, N. J.: Johnson & Johnson. Free, to readers of CLINICAL MEDICINE, 1925.

The name of Sir Joseph Lister always calls to mind the idea of antiseptics, and comparatively few remember that it was he who performed the experiments which popularized catgut ligatures.

In this little volume are gathered together the accounts of these experiments, in Lister's own words, abstracted from his various writings, many of which are now widely scattered and difficult of access.

An interesting addition to the historical literature of medicine.

## WILSON: THE DOCTOR OF THE FUTURE

PYGMALION OR THE DOCTOR OF THE FUTURE. By R. M. Wilson, M.D., Ch.B. New York: E. P. Dutton and Company, 1926. Price \$1.00.

When somebody begins to prophesy what is going to happen in the years to come, his remarks make a subtle but potent appeal to most of us. When he begins to talk about the kind of doctors who will be taking care

of our grandchildren and great grandchildren the appeal is less subtle and more direct and potent.

In this little book, Dr. Wilson has handed us a mouthful of food for thought which will keep us chewing for some time to come and, if we are able to digest and assimilate it, should add materially to our stature and strength as physicians.

If this book could be read by every doctor in the country, it might do much to hasten the coming of a better day for us all.

## CHAPIN AND ROYSTER: DISEASES OF CHILDREN

DISEASES OF INFANTS AND CHILDREN. By Henry Dwight Chapin, A.M., M.D., and Lawrence Thomas Royster, M.D. Fifth Revised Edition. New York: William Wood and Company, 1925. Price \$6.00.

The study of pediatrics has, in recent years, been very extensive, and strides have been made whereby physicians and the mother are better able to handle the problems involved in infant care. Not a little of this progress has been due to the books, periodicals, and other literature treating this phase of medical endeavor.

This (the fifth) edition of this work by pediatricians having a combination of extensive practical experience and facility for study is a valuable guide for the practitioner and student of medicine. The manner in which it is organized, together with its comprehensive index, make it especially valuable.

The volume contains 600 pages of text and a number of instructive illustrations.

The fact that this book enjoys its fifth revised edition and sixth reprint shows its popularity. The first edition was published in 1909, and subsequent editions have kept in touch with the development of pediatrics since that time.

It is a valuable addition to the library of the practitioner and student of medicine.

F. J. H.

## THE TWENTIETH CENTURY

THESE EVENTFUL YEARS; The Twentieth Century in the Making; As Told by Many of Its Makers, Being the Dramatic Story of All That Has Happened Throughout the World During the Most Momentous Period in All History. With 160 Full-Page Illustrations and Numerous Maps. In Two Volumes. London: The Encyclopaedia Britannica Company, Ltd. New York: Encyclopaedia Britannica, Inc. 1924. Price \$11.50.

Although these two volumes are published by the Encyclopaedia Britannica Company, they are not connected with the encyclopedia in any way and are not even intended for the same sort of use. They are not alpha-

betically arranged reference works but are intended to be read as a connected and progressive story of progress in the first quarter of the 20th century.

The first four chapters, by J. L. Garvin, give a bird's-eye view of all the outstanding events of these eventful years, and this is followed by 80 other chapters, each written by a man who was in a position to know the inwardness of the subject about which he was writing.

The reading of these volumes can scarcely fail to make the reader a more interesting and effective member of his community.

#### DAWSON: ORIFICIAL SURGERY

ORIFICIAL SURGERY; Its Philosophy, Application and Technique. With aids, Auxiliary Helps and After Care and Seventy-Three Illustrations. By Benj. E. Dawson, A.M., M.D., F.S.Sc. Edited by Minnie Elda Dawson, Kansas City, Mo.: The Western Baptist Publishing Company. 1925. 1

Orificial surgery is a cult; in fact, in the words of "The Father of Orificial Surgery, our beloved Dr. E. H. Pratt", one should call it, rather, "Orificial Philosophy".

The basic belief of this interesting group is that the "sympathetic nerve" is responsible for all the joy and misery in life; the misery being due to constrictions or "impingements" of this "nerve", due to undue tightness or irritations of the orifices of the body—meaning, almost exclusively, the anus and rectum and the genitourinary passages.

The statement is carefully made, here and there, that orificial surgery is not a cure-all, but, upon scanning this work, there seem to be a few diseases which are not due to "reflexes" connected with the rectum and urethra; in fact, such widely diverse conditions as aphonia, "near-by apoplexy", Bright's disease, osteomyelitis, dementia precox, eczema, epilepsy, jealousy, protracted grief, female impotence, kleptomania, hydrocephalus, paranoia and tuberculosis were cured by "trimming the rectum", "unhooding the clitoris" and similar procedures; while the manual treatment of nymphomania, though not wholly new, should prove very helpful.

As an example of cogent scientific reasoning we quote the following:

"A case of eczema, treated with some local application may promptly disappear. The skin clears up because the local application drives it (the skin?—Reviewer) from its preempted home. The eczema leaves the skin and goes to the inside, the mucous membrane, and the patient has dyspepsia, dysentery or some other internal trouble—metastasis."

The book is written in a florid style, some of it reading more like a sermon than a technical discourse.

To the disciples of the eminent Dr. Pratt, this book will, no doubt, prove a god-send. Its value to those who are not initiated in the "Orificial Philosophy" is decidedly doubtful.

#### POWELL: THE ORGAN OF VITALITY

THE ETHERIC DOUBLE AND ALLIED PHENOMENA. By Major Arthur E. Powell. *Twenty-Four Diagrams.* London: The Theosophical Publishing House, Ltd. (Theosophical Press, 826 Oakdale Ave., Chicago). 1925. Price \$2.25.

Most of us have realized that we get from the sun, directly or indirectly, all the energy manifested upon this earth in whatever manner, and comparatively recent studies in phototherapy and the invisible radiant energies above and below the spectrum are convincing many that what we call vitality comes also from the sun.

That there is a separate vehicle or organ for the assimilation and distribution of vitality will, however, seem a strange idea to those who have pursued no occult studies. Those who have studied along such lines find that there are many references to such a structure scattered through the literature. Major Powell has added no new material to our knowledge of the etheric double, but has brought together under one cover all or most of the information on this subject now extant.

The hypothesis is, briefly, that the manifestations of such energies as electricity, radium emanations, x-rays, etc., take place in a physical material of such fineness and tenuity that it cannot be perceived by the senses unless they have been especially trained; that this substance may be known as etheric physical matter; and that, in the human body, it composes the etheric double, a structure having the form and approximately the size of the dense body, which exercises the function of absorbing and specializing the vitality given off by the sun and distributing it to the various parts and organs of the dense body.

The processes by which the absorption, specialization and distribution of vitality are carried on are described in considerable detail, with a number of diagrams to render the mechanism clearer.

There are chapters dealing with mesmerism, hypnotism, magnetic healing, mediumship and various allied phenomena, and especially a very interesting chapter discussing the work of Dr. Walter J. Kilner who, by the use of ray screens, consisting of flat glass cells filled with various dicyanin dyes, was able to visualize the etheric double at will.

On the whole, we feel that the labor of compiling this material has been well spent, for we know of no other volume containing so much information regarding a human structure or function whose fringes we are just beginning to grasp.

#### DYKE: AUTOMOBILE ENCYCLOPEDIA

DYKE'S AUTOMOBILE AND GASOLINE ENGINE ENCYCLOPEDIA. The Elementary Principles, Construction, Operation and Repair of Automobiles, Gasoline Engines and Automobile Electric Systems; including

Trucks, Tractors and Motorcycles. *By A. L. Dyke, Fourteenth Edition. Chicago: The Goodheart-Willcox Company, Inc. 1925. Price \$7.50.*

#### KOEHLER AND EHRENFEST: THERAPY OF PUERPERAL FEVER

THE THERAPY OF PUERPERAL FEVER. *By Privatdozent Dr. Robert Koehler. American Edition prepared by Hugo Ehrenfest, M.D., F.A.C.S. With Twenty-Seven Illustrations. St. Louis The C. V. Mosby Company: 1925. Price \$4.00.*

The high mortality from puerperal septicemia is a reproach to our obstetricians, in general, and as it is some time since a book appeared dealing with this subject, this volume is timely.

Many new methods for dealing with this condition have been put forward in the last few years and Dr. Koehler has had an exceptional opportunity to try out these various methods in the great clinic of Prof. Josef Halban, of Vienna. His clinical results have been regularly and carefully followed up in the dead-house.

The book begins with a discussion of the methods to be used for the protection of the patient against infection, including asepsis for the physician and prophylaxis by vaccines and sera.

Other chapters deal with General Therapy; Local Therapy; Surgical Therapy; Medicinal Treatment of the Infection; and Chemotherapy.

Like many German writers, the author has a tendency to deal with cases of illness, rather than with patients who are ill, and seems more interested in the findings of the autopsy and the laboratory than in the clinical picture.

The illustrations are mostly temperature charts.

There is a very voluminous bibliography, referring almost entirely to foreign journals.

The average American practitioner will gain little of practical value from the study of this book.

#### KINGHAM: NURSING OF EYE CASES

THE NURSING OF EYE CASES. *By Louise Kingham, S.R.N. London: Humphrey Milford (Oxford University Press). A Pamphlet of 16 pages. Price 30 cents.*

#### NEUBURGER: HISTORY OF MEDICINE

HISTORY OF MEDICINE. *By Dr. Max Neuburger. Translated by Ernest Playfair. In Two Volumes. Vol. II, Part 1. London: Humphrey Milford (Oxford University Press). 1925. Price \$2.25.*

#### JACKSON: NEUROLOGICAL FRAGMENTS

NEUROLOGICAL FRAGMENTS. *By J. Hughlings Jackson, M.D., F.R.S., F.R.C.P. London: Humphrey Milford (Oxford University Press). 1925. Price \$3.75.*

#### ENG: EMOTIONAL LIFE OF THE CHILD

EXPERIMENTAL INVESTIGATIONS INTO THE EMOTIONAL LIFE OF THE CHILD COMPARED WITH THAT OF THE ADULT. *By Helga Eng (Oslo). Translated by George H. Morrison, M.B. London: Humphrey Milford (Oxford University Press). 1924. Price \$6.50.*

#### DODDS & DICKENS: INTERNAL SECRETIONS

THE CHEMICAL AND PHYSIOLOGICAL PROPERTIES OF THE INTERNAL SECRETIONS. *By E. C. Dodds, Ph. D., B. Sc., M. D., B. S. and F. Dickens, M. A., Ph. D. London: Humphrey Milford (Oxford University Press). 1925. Price \$2.50.*

#### AMERICAN LIFE CONVENTION: MEDICAL SECTION PROCEEDINGS

Proceedings of the Fifteenth Annual Meeting of the Medical Section of the American Life Convention held at St. Louis, June 2, 3, and 4, 1925.

#### KENNEDY: PARASITOLOGY

PARASITOLOGY FOR MEDICAL STUDENTS. *By Alex. Mills Kennedy, M. D. (Glas.) London: Humphrey Milford (Oxford University Press). 1925. Price \$3.00.*

#### WORLD WAR STATISTICS

THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY IN THE WORLD WAR. *Volume XV. Statistics. Part Two, Medical and Casualty Statistics. Prepared under the directions of Maj. Gen. M. W. Ireland, the Surgeon General, by Maj. Albert G. Love, M.C., U. S. Army. Washington: Government Printing Office. 1925.*

#### MILLER: TONSIL ENUCLEATIONS

SUBMUCOUS ENDOCAPSULAR TONSIL ENUCLEATIONS. With discussion of the evolution of knowledge of the tonsil as a disease-producing factor and various methods of enucleation. *Excerpts from clinics of Charles Conrad Miller, M.D., Chicago: The Oak Press. 1925.*

# Medical News

## MEDICAL-DENTAL COOPERATION

An important step toward full cooperation of the medical and dental professions in the matter of public health education was taken when the Medical and Dental Societies of Chicago met together, on January 27, 1926, to discuss their joint problems, and followed this up by cooperating in demonstrating methods of physical examinations at the annual meeting and clinic of the Dental Society which occupied the above date and the two succeeding days. This is progress in the right direction.

## TWO HUNDREDTH ANNIVERSARY OF GUY'S HOSPITAL

Guy's Hospital, London, one of the most famous hospitals in the world, is this year celebrating its 200th anniversary, having been founded in 1725 by an endowment made by Thomas Guy, a wealthy philanthropist of that day, when endowing hospitals was not such an ordinary occurrence as it is now.

## NORWEGIAN-AMERICAN HOSPITAL'S SECOND SEMESTER

At the 11 A. M. conferences at the Norwegian-American Hospital, 1044 N. Francisco St., Chicago, the teachers for the second semester of the 1925-26 session will be:

Mondays: Dr. Robbins—embryology.

Tuesdays: Dr. B. Fantus—pharmacology and therapeutics.

Wednesdays: Drs. Kraft, Abt, Blatt, and Vanderslice—pediatrics.

Thursdays: Drs. Heaney, Martin, Schmitz and Fischman—gynecology.

Fridays: Dr. D. Crile—orthopedics.

Saturdays: Dr. Amberson—physiology.

All physicians are welcome at any or all of these meetings.

## OPENING IN IOWA

Dr. A. F. H. de Lespinasse finds it necessary to let go of what he calls a "wonderful proposition", on account of failing health. A physician with money to invest might receive some interesting information by writing to the doctor at Orange City, Iowa.



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## DR. LORENZ AND ONE OF HIS PATIENTS

Dr. Adolf Lorenz, the subject of our biographical sketch this month, is here shown with one of the little patients upon whom he operated during his visit to the United States in 1921. The expressions on the faces of the famous Viennese surgeon and of the lad indicate that the operation was a success.

## "DRY ICE"

There is some prospect that commercial use will soon be made of "dry ice", or carbon dioxide snow. This ice is 142° F. colder than ice made from water (it freezes at 110° below zero F.) and melts much more slowly than water-ice, returning to a gaseous state and leaving no trace.

## SPECIAL DERMATOLOGY NUMBER

The March, 1926, number of the *Medical Review of Reviews* will be a special der-



matology number, under the editorial supervision of Dr. Herman Goodman, of New York. The advance table of contents looks very interesting.

#### WAR RISK INSURANCE

Under the terms and provisions of the World War Veterans' Act of 1924, all yearly renewable term insurance (War time insurance) must be converted, if now in force, or reinstated and converted if lapsed, into some form of United States Government Life Insurance on or before July 2, 1926, after which date no application for reinstatement and conversion can be accepted.

The provisions for reinstatement are so lenient, the terms of the policies so liberal and the premiums so low, as to bring some one of the six converted policies within reach of every veteran, and Director Hines is concerned in seeing that every man or woman entitled to this insurance be advised of his or her rights in connection with it before it is too late.



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#### WINS AWARD FOR RESEARCH WORK

Dr. John J. Abel, Professor of Pharmacology at the Johns Hopkins medical school, has won the \$2500 annual award offered by the Research Corporation of New York.

This award is given each year to the man who "has made an outstanding contribution to the cause of science without profit to himself." Dr. Abel has dedicated his life to this work and has made many important discoveries, among them being an artificial kidney and the synthetic production of pure epinephrin from which the commercial product adrenalin is manufactured.

#### OPENING IN CALIFORNIA

Dr. David Franklin, of Maxwell, Cal., desires to retire on account of age and will sell his lease and equipment for \$1,500. The nearest physician is nine miles away and Maxwell is in the midst of a good farming district. If interested address the doctor at Post Box 232, Maxwell, Cal.

#### PLENTY OF PHYSICIANS IN QUINCY, ILL.

Letters have been sent out by the management of a new professional building in Quincy, Ill., to the effect that there is a splendid opening in that city and that more doctors are needed.

The County Medical Society of Adams County finds that the ratio of physicians to population in Quincy is considerably above that of the country at large and desires to inform the members of the profession generally of the true conditions so that no one may be influenced by misleading literature and give up his present location in the hope of finding a better one in this Illinois city.

#### DEATH OF NORMAN CAMERON

Norman Cameron, of Cameron's Surgical Specialty Company, who was well and favorably known by many physicians all over the country, died of smallpox in Oakland, California, February 13th, 1926, after a brief illness.

#### WESTERN PHYSIOTHERAPY ASSOCIATION

The Western Physiotherapy Association will hold its eighth annual meeting at Kansas City, Mo., April 15 and 16, 1926; one week before the A.M.A. meeting, at Dallas, Tex. The Western School of Physiotherapy will hold sessions at the same place April 8 to 14. For full information address Dr. Chas. W. Fassett, 115 E. 31st St., Kansas City, Mo.

# Send for This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceutical, physicians' supplies, foods, etc., CLINICAL MEDICINE will gladly forward requests for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use the numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

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| A- 30 Helping the Cell to Help Itself. 32-page booklet. The Alkalol Co.                            | A-306 Letters-in-Evidence from Physicians. Philo Burt Mfg. Co.  |
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| A- 63 Arsenauro and Mercauro. 100-page booklet. Parmele Pharmacal Co.                              | A-419 Ten Scientific Reasons for Using Pluto Water. French Lick Springs Hotel Co.                                       |
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| A-236 The Glycerophosphates. 8-page folder. Smith, Kline & French Co.                              | A-434 Safe sedation. 12-page booklet. John B. Daniel.   |
| A-238 Ethical Medicinal Specialities. 8-page booklet. A. H. Robins Co.                             | A-435 A Sanitarium Vacation. 24-page booklet. The Ralph Sanitarium.   |
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| A-243 Useful Information for the Practitioner. 24-page booklet. Chas. H. Phillips Chemical Co.     | A-456 The World's Most Wonderful Canal. 16-page booklet. Reed & Carnrick.   |
| A-249 A Sinsusoidal Manual, by T. C. Cornell, M.D. 54-page booklet. McIntosh Electrical Corp.      | A-473 The Calcreose Detail Man. 14-page booklet. The Maltbie Chemical Co.   |
| A-271 Pharmaceutical Preparations of Established Merit. 11-page booklet. E. Bilhuber, Inc.         | A-479 Formulas for Infant Feeding with Modified Milk Combined with Sharp & Dohme's Milk of Magnesia. Sharp & Dohme.     |
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- A-638 Service Sugestions (Supplement, Jan.-Feb.). 4-page folder. Victor X-Ray Corp.
- A-639 Service Suggestions (Jan.-Feb., 1926). 12-page folder. Victor X-Ray Corp.
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- A-646 Intravenous Medication, by Walter C. Swann, M.D. 4-page reprint. N. Y. Intravenous Laboratory.
- A-647 A Plea for Intravenous Therapy Based on Over Two Thousand Injections and Three Years of Practical Expience. By William J. Hall. 4-page reprint. N. Y. Intravenous Laboratory.
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- A-666 The Vicious Circle and Its Efficient Treatment. 24-page booklet. Vass Chemical Co.
- A-667 Notes and Abstracts. 82-page booklet. Johnson & Johnson.
- A-668 "Jelco" Supporter Booklet. Chesterman-Leeland Co.

